MOYER DIEBEL

Installation/Operation Manual with Service Replacement Parts

351HT

Undercounter High Temperature Dishwasher

Models:

351HT

Machine Serial No.

Issue Date: 6.15.15

***Manual P/N** 0512864 rev. F*

For machines beginning with S/N W090217876 and above

3765 Champion Blvd.
Winston-Salem, NC 27105
336/661-1992 Fax: 336/661-1660
Toll-free: 800/ 858-4477

2674 N. Service Road, Jordan Station
Ontario, Canada L0R 1S0
905/562-4195 Fax: 905/562-4618
Toll-free: 800/ 263-5798

Printed in the USA

For future reference, record your dishwasher information in the box below.

Model Number_____ Serial Number_____

Voltage_____Hertz_____ Phase_____

Service Agent _____ Tel:_____

Parts Distributor _____ Tel:_____

National Service Department

In Canada:
Toll-free: 800/ 263-5798
Tel: 905/ 562-4195
Fax: 905/ 562-4618
email: service@moyerdiebellimited.com

In the USA:
Toll-free: 800/ 858-4477
Tel: 336/ 661-1992
Fax: 336/ 661-1660
email: service@moyerdiebel.com

ATTENTION:

The model no., serial no., voltage, Hz and phase are needed to identify your machine and to answer questions.

The machine data plate is located on the lower front panel.

Please have this information ready if you call for service assistance.

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Make sure you are connected to the internet then click or enter the address below.

In the U.S.A

http://www.moyerdiebel.com/register

In Canada

http://www.championindustries.com/canada/register

PRODUCT REGISTRATION BY FAX

COMPLETE THIS FORM AND FAX TO:

(336) 661-1660 in the USA

1-(800) 204-0109 in Canada

PRODUCT REGISTRATION CARD

Model	Serial #

Date of Installation: ___/___ /____

Company Name: _____

Address: _____ _____ _____
(Street) *Province* *Postal Code*

Telephone #: ( ) _____ --- _____

Contact: _____

Installation Company: _____

Address: _____

Telephone #: _____

Contact: _____

FAILURE TO REGISTER YOUR PRODUCT MAY VOID YOUR WARRANTY

IMPORTANT IMPORTANT

Revision History

A revision might be a part number change, a new instruction, or other information that was not available at print time. We reserve the right to make changes to these instructions without notice and without incurring any liability by making the changes. Equipment owners may request a revised manual, at no charge, by calling 1 (800) 858-4477 in the USA or by calling 1 (800) 263-5798 in Canada.

Revision Date	Revised Pages	Serial Number Effectivity	Revision Description
4.10.09	All	W090217876	Released First Edition
1.04.11	31 33 35 44-45	W090217876	Item 5 changed to 0513110 Item 6 changed to 0512120 Item 18 changed to 0312840 Item 13 changed to 0512855 Deleted item 1, corrected nos. Item 16 changed to 0312924
3.15.11	22-23 42-43	W090217876	Added motor fan cover P/N 0513131 Added adapter P/N 0512794
6.09.11	46-47	W090217876	Changed door assembly to P/N 0713141
6.15.15	36-37 51	W150551128 W150551128	Added Pressure Switch Assy. and Air Trap Assy. Revised Electrical Schematics

LIMITED WARRANTY

Moyer Diebel, 3765 Champion Blvd., Winston-Salem, North Carolina 27105, and P.O. Box 301, 2674 N. Service Road, Jordan Station, Canada, L0R 1S0, warrants machines, and parts, as set out below.

Warranty of Machines: Moyer Diebel warrants all new machines of its manufacture bearing the name "Moyer Diebel" and installed within the United States and Canada to be free from defects in material and workman ship for a period of one (1) year after the date of installation or fifteen (15) months after the date of shipment by Moyer Diebel, whichever occurs first. [See below for special provisions relating to glasswashers.] The warranty registration card must be returned to Moyer Diebel within ten (10) days after installation. If warranty card is not returned to Moyer Diebel within such period, the warranty will expire after one year from the date of shipment.

Moyer Diebel will not assume any responsibility for extra costs for installation in any area where there are jurisdictional problems with local trades or unions.

If a defect in workmanship or material is found to exist within the warranty period, Moyer Diebel, at its election, will either repair or replace the defective machine or accept return of the machine for full credit; provided; however, as to glasswashers, Moyer Diebel's obligation with respect to labor associated with any repairs shall end (a) 120 days after shipment, or (b) 90 days after installation, whichever occurs first. In the event that Moyer Diebel elects to repair, the labor and work to be performed in connection with the warranty shall be done during regular working hours by a Moyer Diebel authorized service technician. Defective parts become the property of Moyer Diebel. Use of replacement parts not authorized by Moyer Diebel will relieve Moyer Diebel of all further liability in connection with its warranty. In no event will Moyer Diebel's warranty obligation exceed Moyer Diebel's charge for the machine. The following are not covered by Moyer Diebel's warranty:

a. Lighting of gas pilots or burners.
b. Cleaning of gas lines.
c. Replacement of fuses or resetting of overload breakers.
d. Adjustment of thermostats.
e. Adjustment of clutches.
f. Opening or closing of utility supply valves or switching of electrical supply current.
g. Cleaning of valves, strainers, screens, nozzles, or spray pipes.
h. Performance of regular maintenance and cleaning as outlined in operator’s guide.
i. Damages resulting from water conditions, accidents, alterations, improper use, abuse, tampering, improper installation, or failure to follow maintenance and operation procedures.
j. Wear on Pulper cutter blocks, pulse vanes, and auger brush.

Examples of the defects not covered by warranty include, but are not limited to: (1) Damage to the exterior or interior finish as a result of the above, (2) Use with utility service other than that designated on the rating plate, (3) Improper connection to utility service, (4) Inadequate or excessive water pressure, (5) Corrosion from chemicals dispensed in excess of recommended concentrations, (6) Failure of electrical components due to connection of chemical dispensing equipment installed by others, (7) Leaks or damage resulting from such leaks caused by the installer, including those at machine table connections or by connection of chemical dispensing equipment installed by others, (8) Failure to comply with local building codes, (9) Damage caused by labor dispute.

Warranty of Parts: Moyer Diebel warrants all new machine parts produced or authorized by Moyer Diebel to be free from defects in material and workmanship for a period of 90 days from date of invoice. If any defect in material and workmanship is found to exist within the warranty period Moyer Diebel will replace the defective part without charge.

DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY. MOYER DIEBEL'S WARRANTY IS ONLY TO THE EXTENT REFLECTED ABOVE. MOYER DIEBEL MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED, TO ANY WARRANTY OF MERCHANTABILITY, OR FITNESS OF PURPOSE. MOYER DIEBEL SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. THE REMEDIES SET OUT ABOVE ARE THE EXCLUSIVE REMEDIES FOR ANY DEFECTS FOUND TO EXIST IN MOYER DIEBEL DISHWASHING MACHINES AND MOYER DIEBEL PARTS, AND ALL OTHER REMEDIES ARE EXCLUDED, INCLUDING ANY LIABILITY FOR INCIDENTALS OR CONSEQUENTIAL DAMAGES.

Moyer Diebel does not authorize any other person, including persons who deal in Moyer Diebel dishwashing machines to change this warranty or create any other obligation in connection with Moyer Diebel Dishwashing Machines.

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Model Description

351HT
High temperature hot water sanitizing dishwasher with built-in 40°F/22°C rise booster heater.
208-240VAC/60/1

Optional Equipment *(consult factory)*
70°F/39°C rise built-in booster heater
1-RDT Dish table
17" stand
17" Storage cabinet
6" legs (set of 4)
Additional peg or flat-bottom dishracks

Receiving

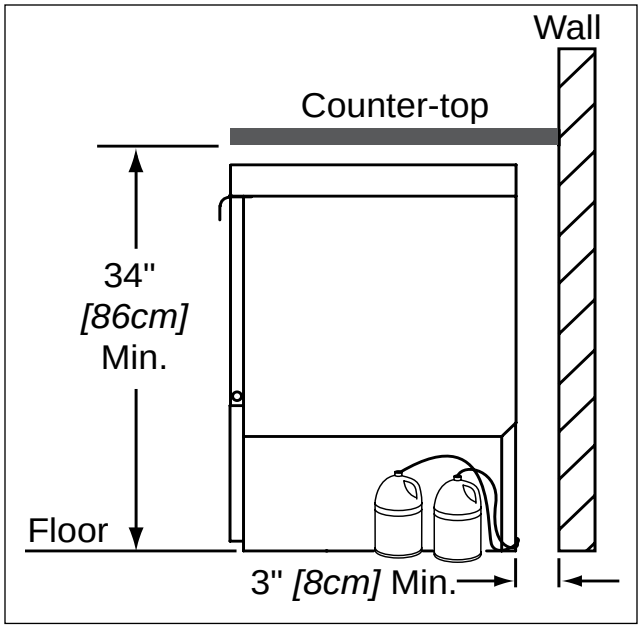
NOTE:
The installation of your dishwasher must be performed by qualified service personnel.
Problems due to improper installation are not covered by the Warranty.

1. Inspect the outside of the dishwasher carton for signs of damage.
2. Remove the carton and inspect the dishwasher for damage.
3. Check for any accessories that may have shipped with your dishwasher.
4. Turn to the front of this manual for instructions on how to register your machine online.
5. Move the dishwasher near its permanent location.

CAUTION:
Be careful when lifting and moving the dishwasher to prevent damage to the machine.

NOTE:
The installation of the dishwasher must comply with local health codes.

6. Compare the installation site utility connections with the dishwasher utility connections and make sure they are the same.
7. The dishwasher can be installed as a free-standing unit or under a built-in counter-top. The typical counter-top height in most locations is 34" [86cm].
8. Under counter installations should provide storage space for the dishwasher chemical supply containers.
9. Chemical supply containers should be placed as close to the machine as possible.
10. Place the dishwasher in its permanent location.
11. The dishwasher has 4 adjustable feet for leveling.
12. Level the dishwasher front-to-back and side-to-side.



Electrical Connections

WARNING:
Electrocution or serious injury may result when working on an energized circuit.

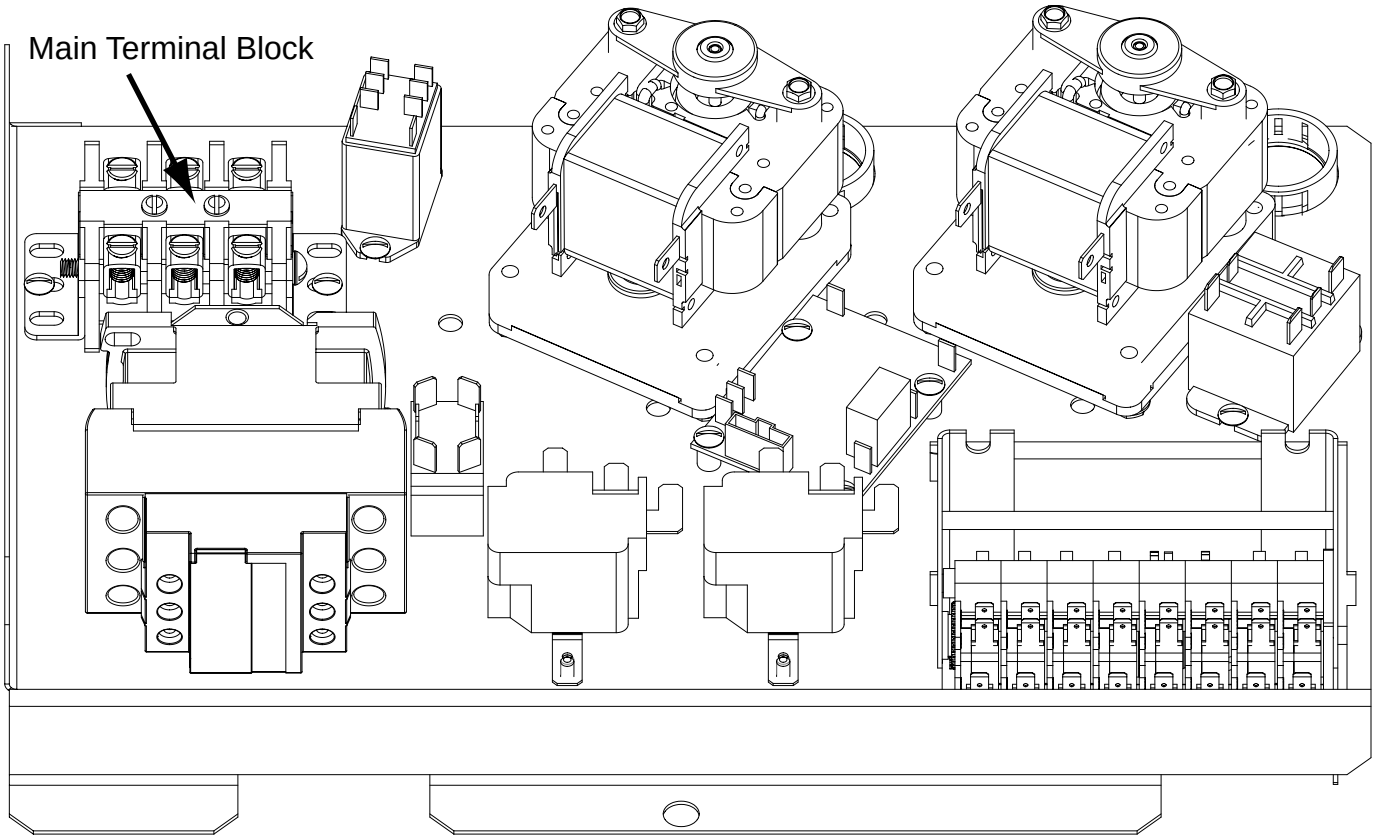
Disconnect power at the main breaker or service disconnect switch before working on the circuit.

Lock-out and tag the breaker to indicate that work is being performed on the circuit.

ATTENTION

A qualified electrician must connect the main incoming power to the dishwasher in accordance with all local codes and regulations or in the absence of local codes in accordance with the National Electrical Code

VERIFY THE CORRECT VOLTAGE IS SUPPLIED TO THE MACHINE
THE CORRECT SUPPLY VOLTAGE IS 115/208-240VAC/60/1.
(See the diagram on next page.)



The Main Terminal Block (MTB) is located on the left-rear corner of the electrical panel.

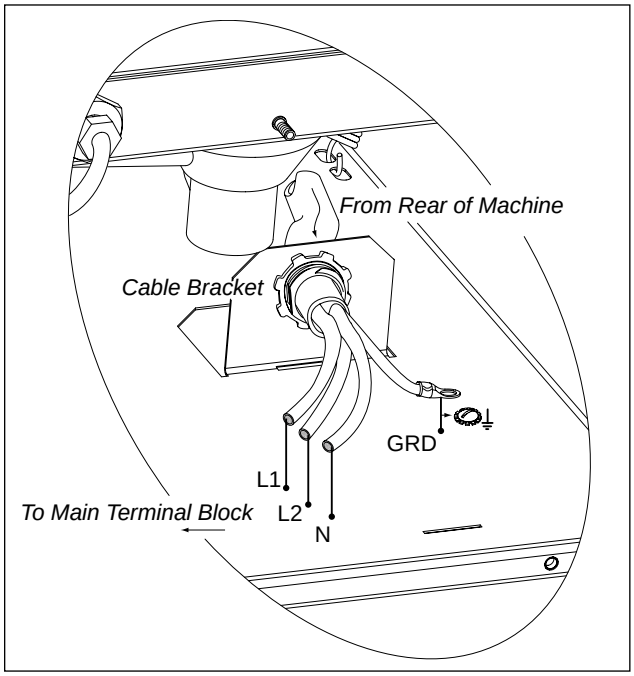
Electrical Connections

1. Refer to the connection diagram on the preceding page and the photo below:
2. Machines require a 3-wire plus ground supply which includes a current carrying neutral.
3. Power connections are made at the Main Terminal Block (MTB).
4. The MTB is located on the left-rear corner of the electrical panel behind the front access panel. (See the illustration on the previous page.)

NOTE:
Provide a 3 foot service loop in the power cable at the back of the dishwasher for service.

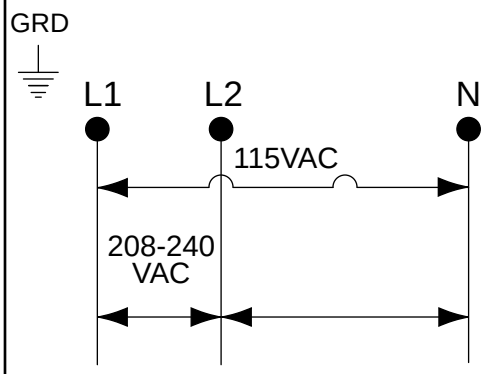
To Connect Main Power to the Dishwasher:

1. Remove the lower front access panel of the dishwasher.
2. Locate the electrical mounting panel on the right-side of the machine. Remove the retaining nut at the top of the panel that holds the panel in place.
3. Lower the panel and pull it forward to gain access the MTB.
4. Feed the power cable through the cable hole located on the right side, as viewed from the front of the machine, into the interior of the machine.
5. Make sure the cable passes through the cable mounting bracket located near the front-center of the base and secure the cable with a cable connector.
6. Connect the ground wire to the base of the dishwasher with the ground screw provided next to the cable mounting bracket.
7. Feed the remaining cable wires to the Main Terminal Block and connect according to the connection diagram to the right.



Route the supply cable through the cable bracket.

SINGLE PHASE POWER CONNECTION
115/208-240VAC/60/1



HOW TO CONNECT POWER

1. Check the data plate on the front of the dishwasher for the voltage of the machine.
2. Remove the lower-front access panel.
3. Lower the electrical component bracket.
4. Feed the power cable from the rear of the dishwasher to the center of the machine and through the cable bracket.
5. Connect the ground wire to the base of the dishwasher using the ground screw located near the bracket.
6. Feed the power leads to the terminal block.
7. Connect L1, L2 and a currrect-carrying neutral to the Main Terminal Block.
8. Main Power connections are complete.

Water Connections

Note
Plumbing connections must comply with national, local plumbing and sanitary codes.

IMPORTANT
Make sure the flexible water supply and drain hoses are not kinked.

1. All models have a 6 ft. flexible hot water fill hose with a 3/4" NPS connector.
2. A 1/2" or larger main incoming supply line should be installed to the dishwasher.
3. A 1/2" or larger shut-off valve should be installed in the water supply line as close to the dishwasher as possible for service.
4. The pressure regulating valve, PRV, **must be installed** after the shut-off service valve if the incoming flow pressure exceeds
   20-22 psi.
5. The hot water supply must provide a minimum of 140°F/60°C, measured at the dishwasher for the 40°F/ 22°C rise booster.
6. For the 70°F/39°C rise booster the hot water supply must provide a minimum of 110°F/43°C measured at the dishwasher.
7. A water hardness of 3 grains/U.S. gal [51.3mg/L] or less is recommended.

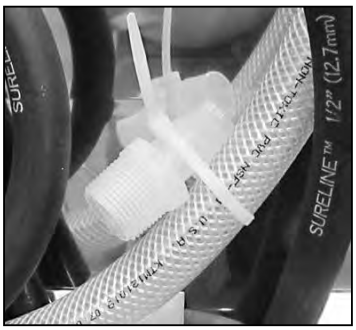
Drain Connections

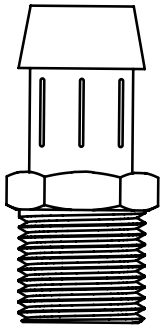
ATTENTION
Do not connect the drain hose to a disposer. The dishwasher will not drain correctly.

1. The dishwasher has a 6ft. 3/4" I.D. drain hose. The maximum drain height connection must not exceed 3 ft.[0.9 m].
2. The drain hose is secured to the rear of the machine by a clamp to maintain a goose-neck bend in the drain hose.

   DO NOT REMOVE THE DRAIN HOSE RETAINING CLAMP.
   DO NOT STRETCH THE DRAIN HOSE.

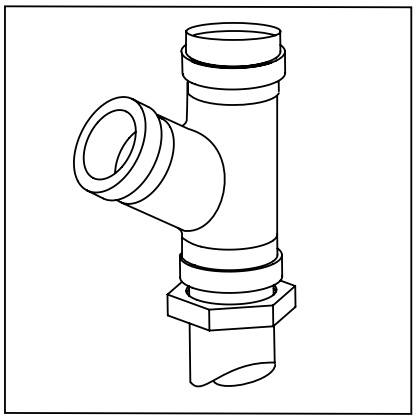
3. A 3/4" hose barb fitting is strapped to the drain hose to use in connecting the drain hose to building drain line. The service part number for the hose barb is P/N 0512231.



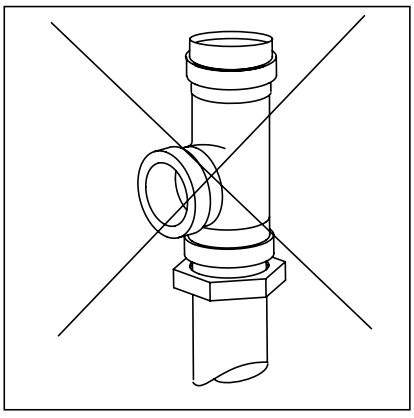


4. Install the drain hose to a "WYE" drain fitting. Connection to a "TEE" fitting will prevent the dishwasher from draining completely.
5. The maximum drain flow is 8 U.S. gpm/7 Imp. gpm/30 L.P.M.
6. Make sure the drain hose does not kink. Kinks will prevent the dishwasher from draining completely, and the dishwasher will overflow out the front door.

   NOTE: DO NOT CONNECT THE DRAIN HOSE TO A DISPOSER.
   THE DISHWASHER WILL NOT DRAIN CORRECTLY.



The dishwasher flexible drain hose must be connected to a WYE fitting.



Do not connect the dishwasher flexible drain hose to a TEE fitting.

Filling the Booster

ATTENTION
VERIFY THE CORRECT VOLTAGE IS SUPPLIED TO THE MACHINE
THE CORRECT SUPPLY VOLTAGE IS 115/208-240VAC/60/1.
(Refer to the diagram on page 3.)

Note:
The dishwasher contains a built-in booster heater that was drained prior to shipment and must be filled with water before operating the dishwasher.

Booster Fill Switch

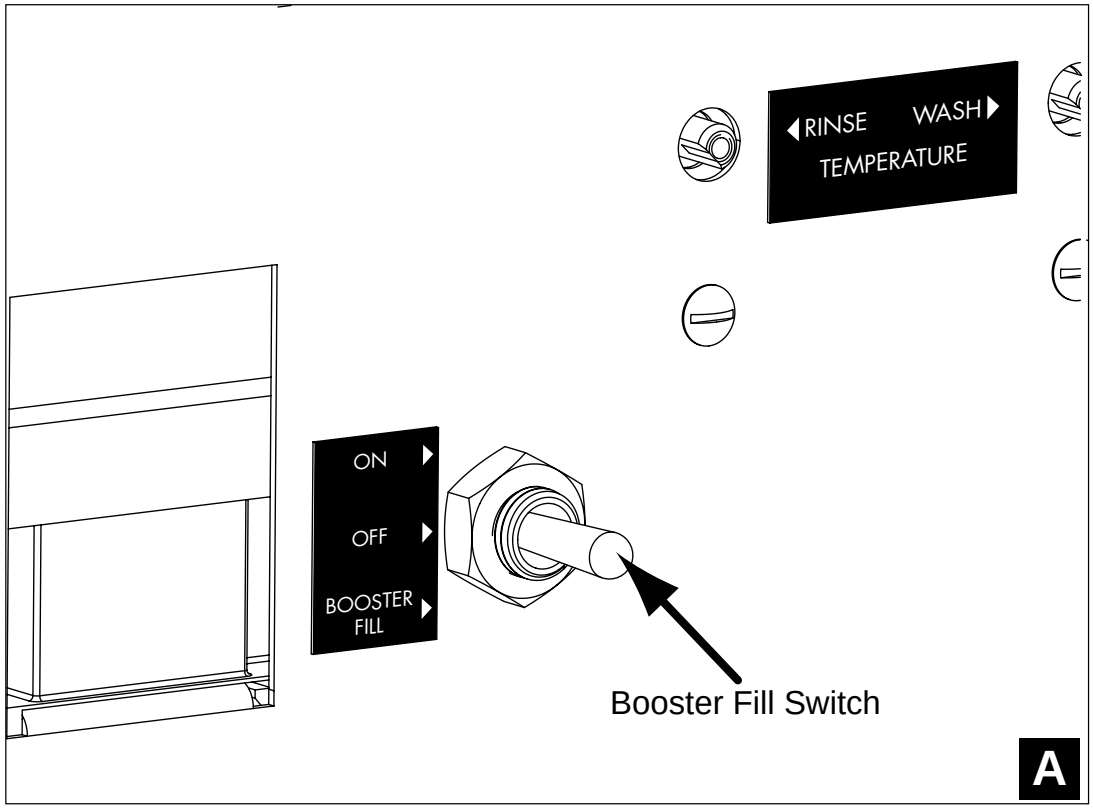
The booster heater is filled using the Booster Fill Switch. It is located behind the lower front access panel and on the left-side of the bracket that holds the chemical dispensing pumps (see the photos below).

Fill the booster heater:

1. Make sure the dishwasher power switch is OFF.
2. Remove the lower front access panel.
3. Locate the booster fill switch. It is in the left-center of the electrical component panel.
4. Make sure the Booster Fill Switch is in the middle position, (OFF).
5. Turn the water supply and the main power supply on.

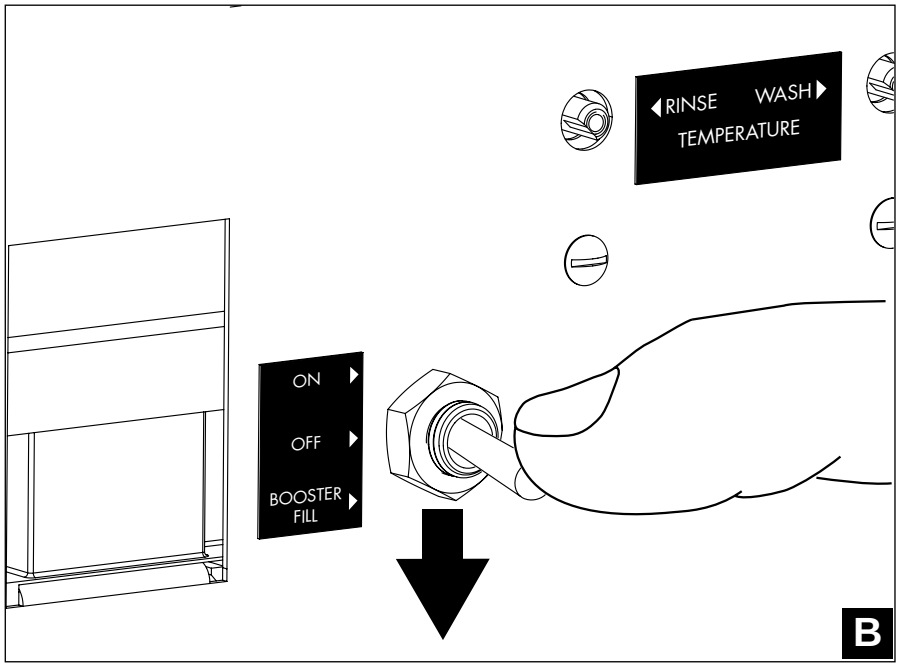
   DO NOT TURN THE DISHWASHER POWER SWITCH ON.

A) Identify the booster fill switch.

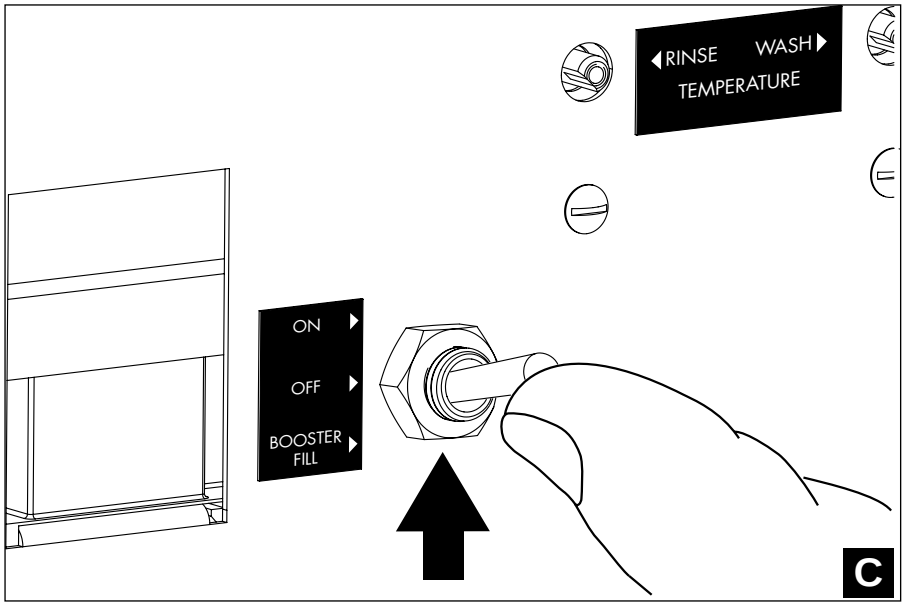


Filling the Booster (continued)

B) Press and hold the Booster Fill Switch down to the BOOSTER FILL position until you hear the water spraying inside the dishwasher wash tank, then release the switch.



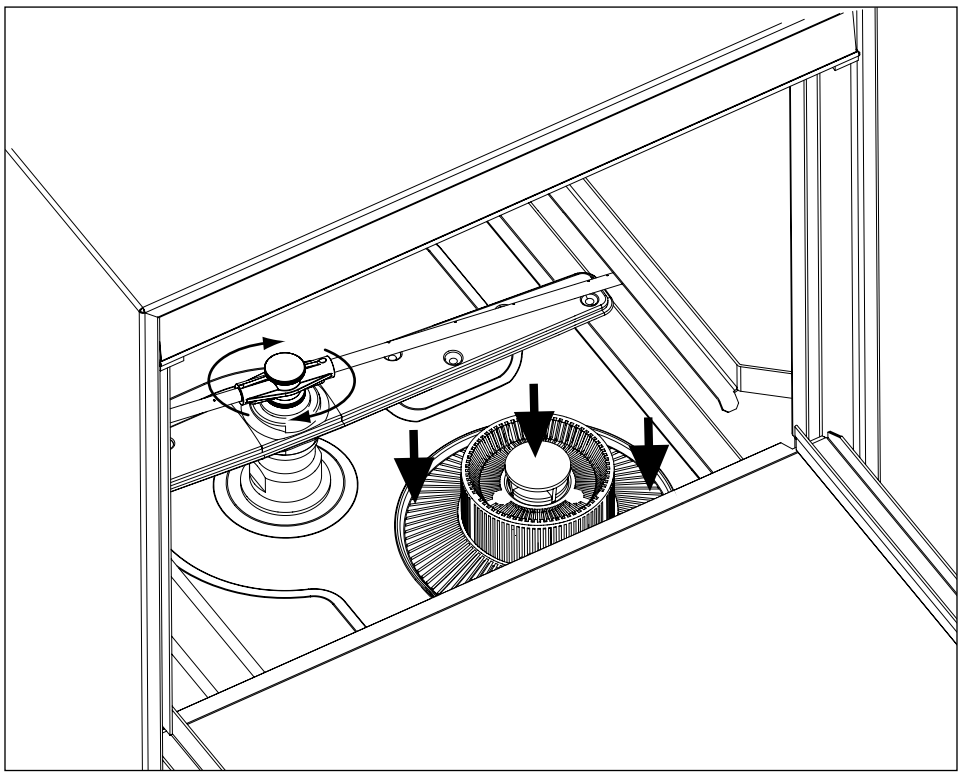
C) Push the switch up to the ON position and release. The booster tank is filled.



Check List

1. Remove any protective film from dishwasher. Check the interior for foreign material.
2. Make sure the dishwasher is permanently located.
3. Make sure all utility connections are complete.
4. Make sure the flexible drain hose and the hot water fill hose are not kinked.
5. Make sure the chemical supply containers are full and the chemical pick-up tubes are installed in the proper containers.
6. Make sure the sump filter is in place.
7. Make sure the overflow tube is installed and firmly seated in the sump.
8. Make sure the spray arms are in place and spin freely.
9. Fully close the dishwasher door.
10. Turn hot water supply on and check for leaks in the main water supply piping connected to the dishwasher.

IMPORTANT
During the initial fill, adjust the PRV to ensure the flowing pressure of the incoming water is set to 20-22 PSI.



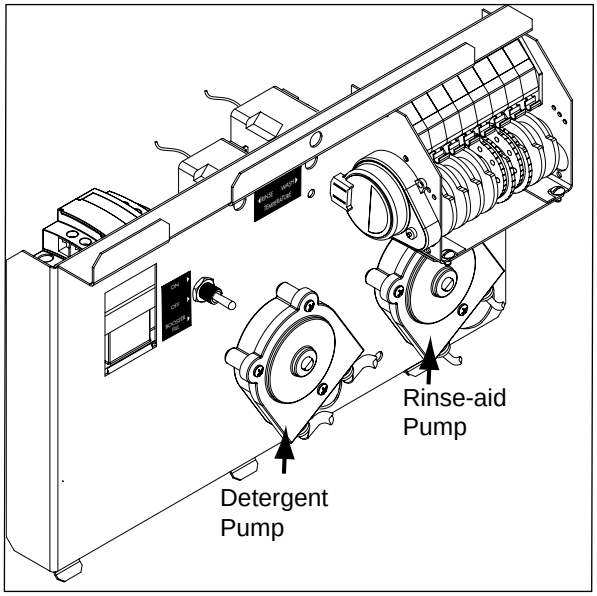
Install the scrap screen, overflow tube, and spray arms.
Make sure the spray arms turn freely.

Chemical Dispensing Pumps

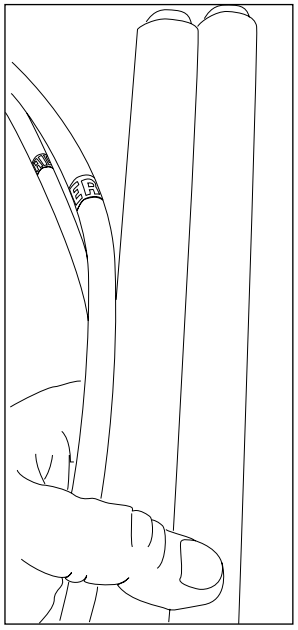
ATTENTION

Contact a local chemical supplier for detergent and rinse-aid chemicals. The detergent should be a non-chlorinated liquid detergent. The chemical dispensing pumps are adjusted by the chemical supplier.

1. The dishwasher is equipped with a built-in detergent dispensing pump and rinse-aid dispensing pump. *(See the photographs below.)*
2. The pumps are located on the lower panel behind the lower-front access panel.
3. Each pump is equipped with 6 feet [1.8 m] of pick-up supply tubing, a stiffener tube, and a strainer.
4. A red label marked DETERGENT is attached to the detergent pump inlet tubing.
5. A blue label marked RINSE-AID is attached to the rinse-aid pump inlet tubing.
6. The detergent enters the wash tank compartment through a fitting at the right rear of the wash compartment *(see the illustration on the next page).*
7. The detergent supply should be a non-chlorinated liquid detergent.
8. The rinse-aid enters the final rinse piping through a fitting located on the upper-left rear side of the dishwasher. The fitting is located near the vacuum breaker *(see the illustration on the next page).*



The dispensing pumps are located behind the lower-front access panel.



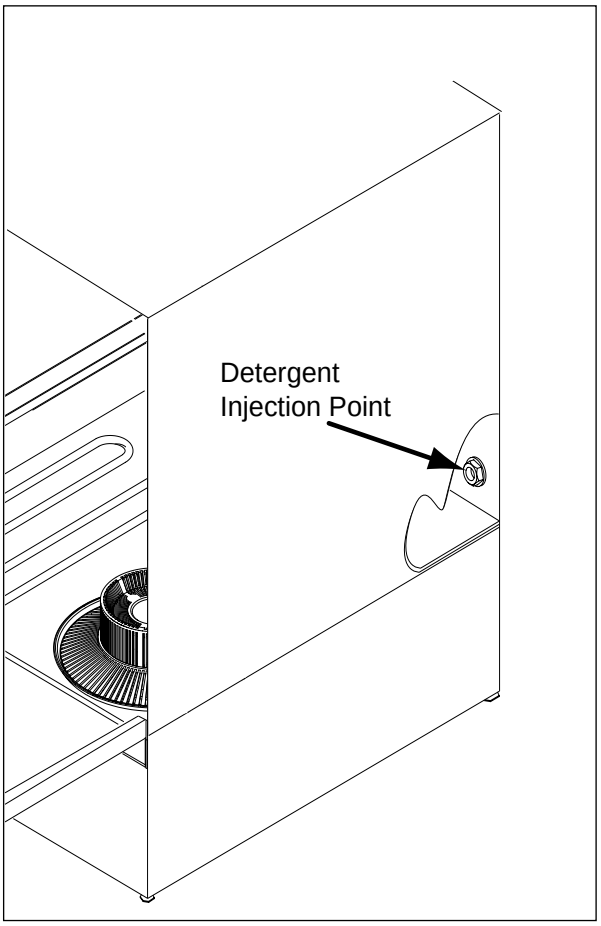
A stiffener tube, strainer and pick-up tubing are supplied with the built-in detergent and rinse-aid pumps.

9. The chemical supplier will choose the appropriate liquid rinse-aid.
10. Your chemical supplier should adjust the dispensers for the supplied product.
11. Place the chemical supply containers as close to the dishwasher as possible.
12. Do not elevate the chemical containers above the finished floor.

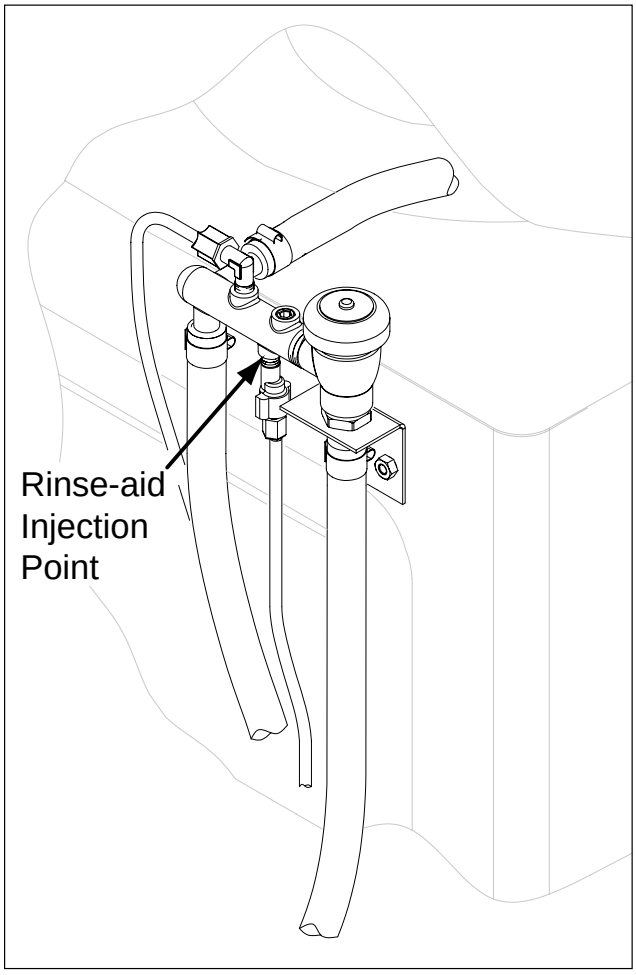
Chemical Dispensing Pumps *(continued)*

Chemical Injection Points

The illustrations below show the location of the detergent and the rinse-aid injection points.



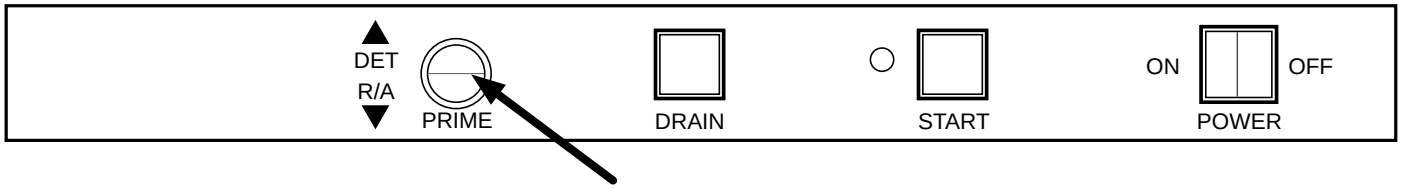
Detergent enters the wash tank compartment through a fitting on the rear wall of the wash tank compartment.



The rinse-aid enters the final rinse piping at the top-rear of the dishwasher near the vacuum breaker.

Priming the Chemical Dispensing Pumps

The chemical dispensing pumps must be primed before the dishwasher is operated. A 2-position PRIME switch is located on the front control panel to do this. The Detergent dispensing pump is primed when the Prime switch is pushed UP to the DET position. The Rinse-aid dispensing pump is primed when the Prime switch is pushed DOWN to the R/A position *(see below).*



Chemical Dispenser Prime Switch

1. Make sure the chemical containers are full and the correct pick-up tubes are in the containers.
2. Turn the dishwasher power switch ON. The switch will illuminate and the dishwasher will fill with water.
3. Once the fill is complete, open the dishwasher door, then push and hold the prime push button UP to the DET (detergent) position until detergent is observed entering at the right-rear of the wash tank compartment.
4. Push and hold the prime push button DOWN to the R/A (rinse-aid) position for 30 seconds. Release the push button.
5. Close the door.

Chemical Dispensing Pumps

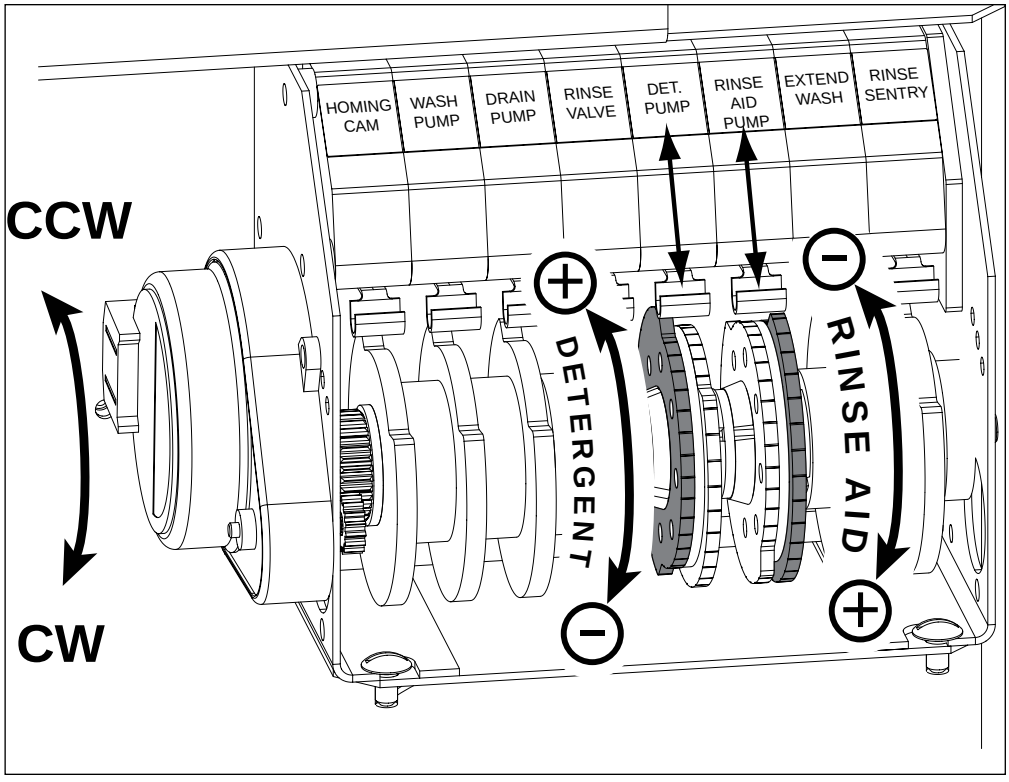
Adjusting the Chemical Dispenser Pumps

The amount of detergent and rinse-aid dispensed during the dishwasher cycle is controlled by adjustable cams on the timer assembly. Variables such as the type of chemicals used and the hardness of the water supply often require that the timer cam settings must be changed. It is recommended that the chemical supplier make these adjustments.
(Refer to the illustration below).

Note:
Only the Detergent and the Rinse-aid cams are adjustable. Do not attempt to adjust any other timer cam.

To adjust the chemical dispensing pump timer cams:

1. Remove the lower-front access panel. The timer assembly is located on the right-side of the electrical component panel.
2. Make sure the dishwasher power is OFF.
3. The detergent timer cam has 2 halves. Hold the stationary right-half of the cam and turn the left-half of the cam counter-clockwise to increase the amount of detergent that is dispensed. Turn the left-half clockwise to decrease the detergent dispensed.
4. The rinse-aid timer cam has 2 halves. Hold the stationary left-half of the cam and turn the right-half of the cam counter-clockwise to decrease the amount of rinse-aid that is dispensed. Turn the right-half clockwise to increase the amount of rinse-aid dispensed.



Normal Wash Mode

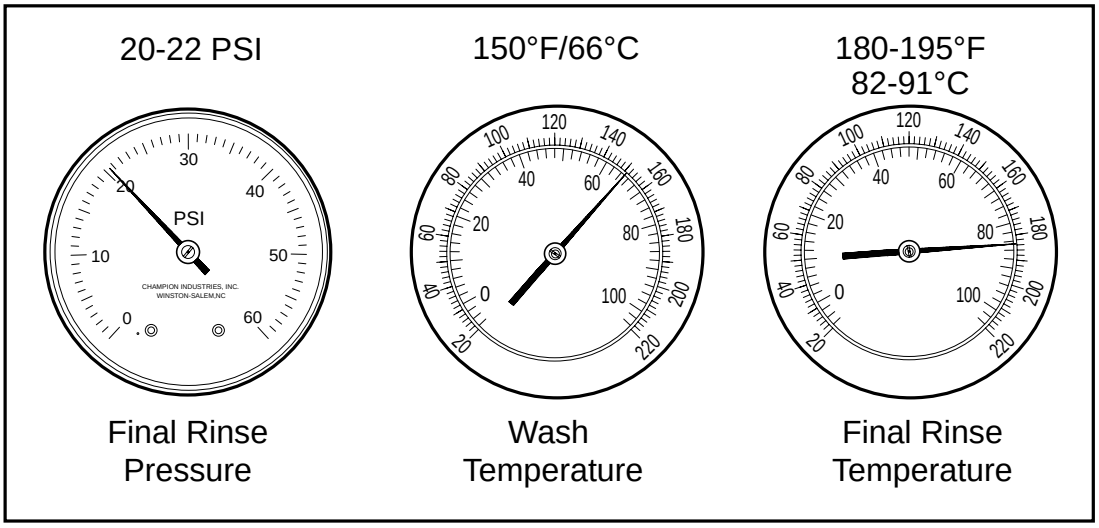
Follow the instructions below to operate the dishwasher in a Normal Wash Mode. A Rinse Sentry feature holds the dishwasher in a wash mode if the booster heater temperature is below 180ºF/82ºC.

1. Turn the main power on at the main circuit breaker.
2. Install the sump filter, overflow tube and spray arms.
3. Make sure the flexible drain hose and the flexible fill hose are not kinked, then turn the water supply on.
4. Close the dishwasher front door.
5. Push the dishwasher Power Switch to the ON position. The power switch will illuminate and the machine will fill with water.
6. Check the pressure gauge as the machine fills and make sure the incoming water pressure is between 20-22 psi.
7. Wait 15 minutes for the WASH temperature gauge to indicate a minimum of 150ºF/66ºC.
8. At the beginning of the day, run 2 empty cycles before checking the final rinse operating temperature. The first cycle will take longer to reach the proper temperature.

ATTENTION

If the wash temperature is low for an extended period of time, drain the machine and refill with fresh water. Run two empty cycles and then check that the wash tank temperature gauge indicates 150°F/66°C.

9. Load soiled wares into the dish rack. Place plates, glasses, cups and bowls in a peg rack. Place utensils in a single layer in a flat-bottom rack. Place pots and pans in a flat-bottom rack. Do not overload the dish racks.
10. Slide 1 dish rack into the wash compartment making sure the wares do not interfere with the rotating spray arms. Do not wash more than 1 dish rack at a time. *(continued on next page)*



The pressure and temperature gauges are located on the lower-left corner of the lower-front access panel.

Normal Wash Mode (continued)

11. Close the front door fully, then press and hold the START BUTTON for 1 second. The green in-cycle light will illuminate and the wash cycle will begin. The wash cycle time runs for approximately 1-1/2 minutes.
12. Opening the door when the dishwasher is in-cycle will stop the dishwasher. The cycle will resume automatically when the dishwasher door is closed fully.
13. The final rinse cycle begins at the end of the wash cycle and runs for approximately 15 seconds Check the RINSE temperature gauge during the final rinse and make sure it indicates a minimum of 180ºF/82ºC. The acceptable range of operation is 180-195ºF/82-91ºC.
14. At the end of the rinse cycle, the in-cycle light will go out. Open the door and remove the clean rack of wares. Repeat steps 8-12 for additional dish racks.
15. Refer to the Cleaning Instructions, *"After Each Meal Period or every 8 Hours of Operation",* on page 15 for the procedures to drain and clean the dishwasher.

Rinse Sentry Mode

The final rinse water temperature must be a minimum of 180ºF/82ºC during the final rinse cycle to ensure all wares are sanitized. If for any reason, the hot water temperature in the booster tank cannot provide this temperature, the dishwasher will enter a Rinse Sentry Mode of operation and extend the cycle time.

The Rinse Sentry changes the Normal Operation Mode as described below:

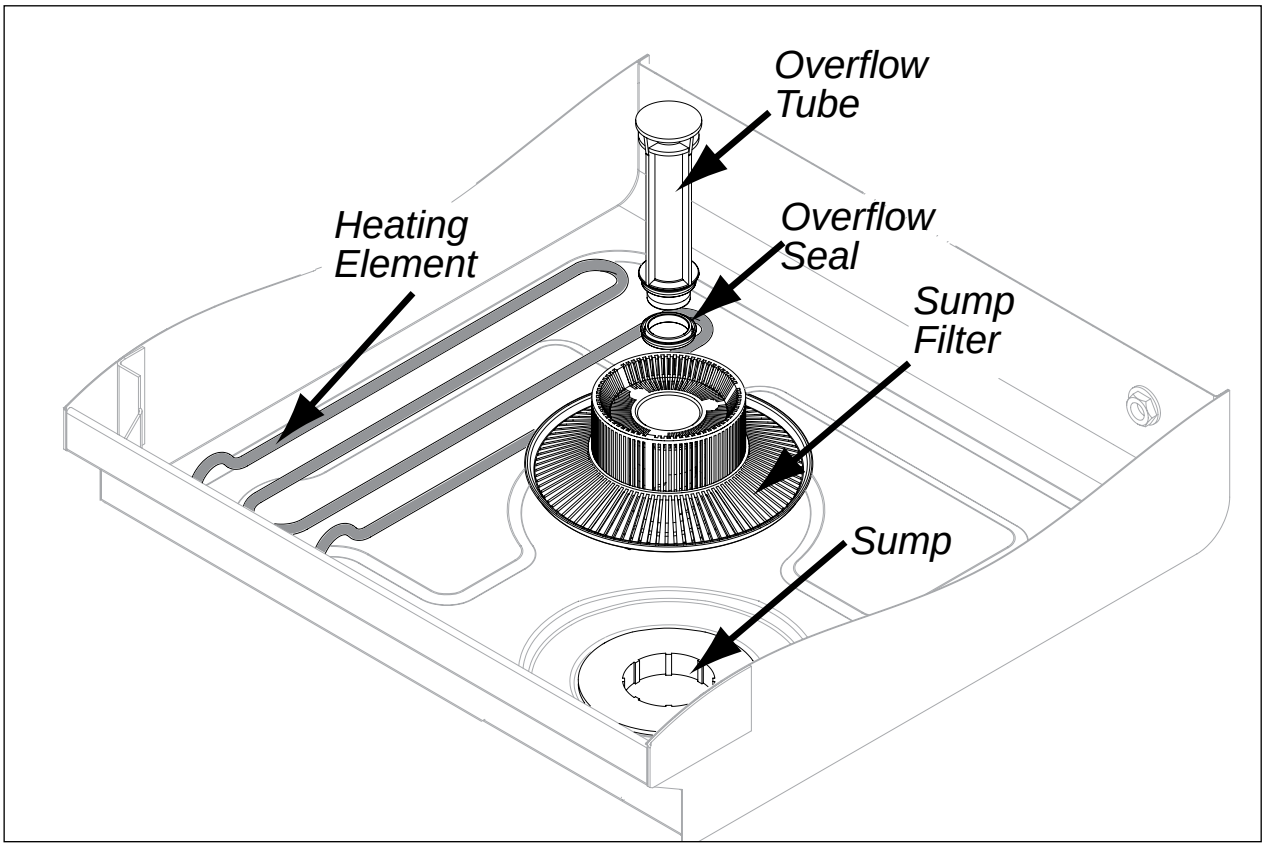
1. The Rinse Sentry constantly monitors the water temperature inside final rinse booster.
2. If the temperature inside the booster heater falls below 180ºF/82ºC then the Rinse Sentry will extend the wash cycle time until the booster heater water temperature reaches the proper temperature.
3. The in-cycle light will remain illuminated during the Rinse Sentry Mode.
4. The RINSE water temperature gauge must be monitored to ensure a minimum of 180ºF/82ºC is maintained during the rinse cycle.
5. The temperature range for the final rinse water is 180-195ºF/82-91ºC.
6. An extraordinarily long wash cycle may indicate a low incoming water temperature or a problem with the booster heater operation.

DO NOT REMOVE WARES UNTIL THE FINAL RINSE CYCLE HAS SANITIZED THE WARES AND THE GREEN CYCLE LIGHT GOES OUT.

Cleaning

After Each Meal Period or every 8 Hours of Operation.

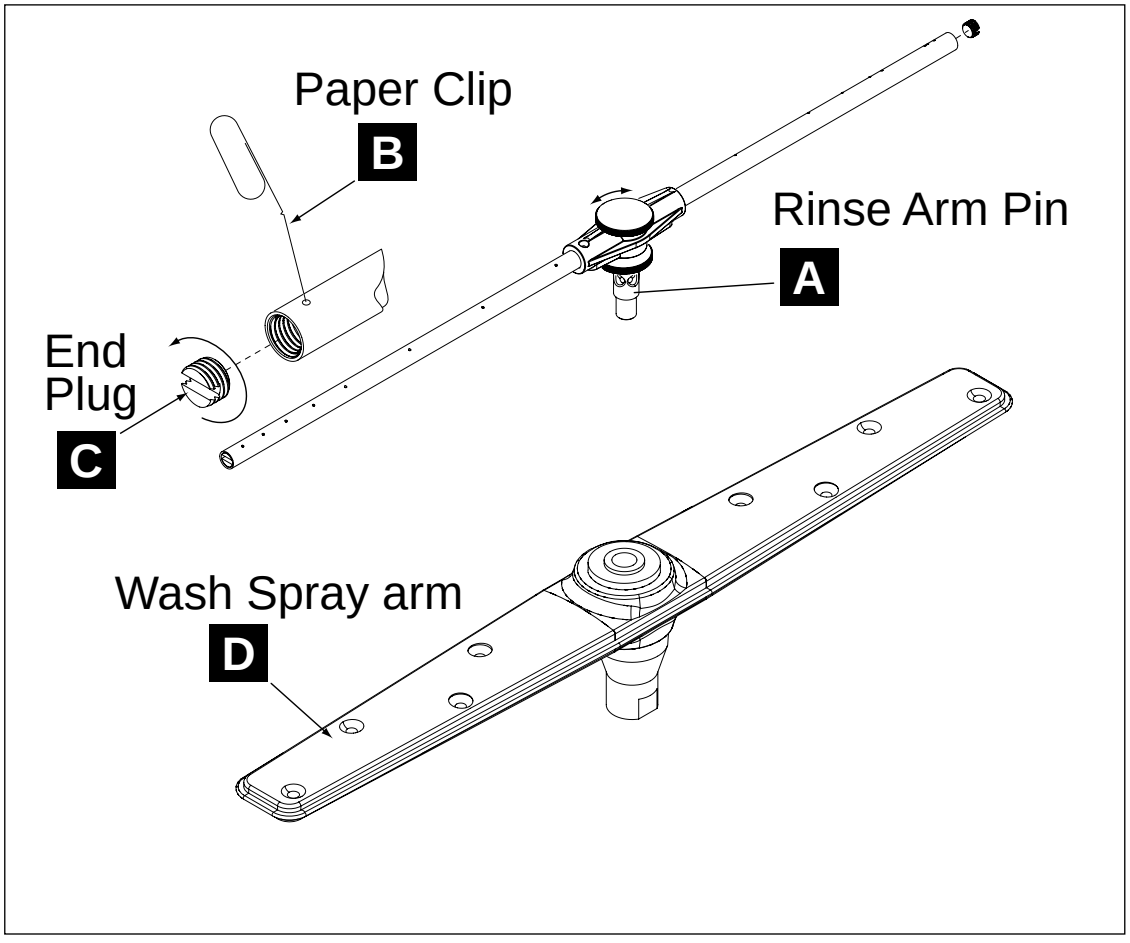
1. Press the lighted power switch to the OFF position. The power switch light will go out.
2. Open the door and remove the overflow tube from the wash tank sump.
3. Inspect and clean the overflow tube rubber seal
4. Close the door.
5. Push and hold the drain switch for 1 second then release.
6. The dishwasher will drain for 50 seconds and then stop.
7. Remove the sump filter carefully to keep the soil or waste particles from falling into the sump.
8. Clean the sump filter by rinsing with clean water.
   Be sure to back-flush the filter.
   Do not strike the filter against solid objects.
9. Check the sump for foreign material and clean as required.
10. Replace sump filter and the overflow tube.
11. Make sure spray arms turn freely.
12. Check the chemical containers and refill as required.
13. Close the door and turn the ON/OFF switch to ON and return to normal operation mode.



Cleaning

At the End of the Day

1. Perform Steps 1-9 on the previous page.
2. Remove the upper and lower rinse and wash spray arms. The spray arms are interchangeable.
3. Unscrew the rinse arm pin (A). Remove the rinse arm assemblies
4. Clean the final rinse arm nozzles using a small paper clip (B).
5. Remove the rinse arm end plugs (C) *if necessary,* and flush the rinse arm with clean water.
6. Re-install the rinse arm end plugs if they were removed.
7. Remove the wash spray arms and flush with clean water.
8. DO NOT USE STEEL WOOL TO CLEAN THE INTERIOR OF THE MACHINE.
9. Contact the chemical supplier for de-liming if required (see next page).
10. Wipe the interior and exterior of the machine with a soft cloth and a mild detergent.
    DO NOT HOSE THE EXTERIOR OF THE MACHINE WITH WATER.
11. Reassemble the dishwasher and leave the door open to allow overnight drying.



De-liming

Minerals accumulate on the interior surfaces of the dishwasher. The deposits have a white haze and, in cases of heavy accumulation, may appear as a granular solid. The generic name for mineral deposits is lime. The removal of lime deposits is called de-liming. Your dishwasher should be de-limed regularly; how often will depend on the mineral content of your water.

Inspect your machine interior for lime deposits. If de-liming is required, a de-liming agent should be used for best results in accordance with the chemical supplier's instructions.

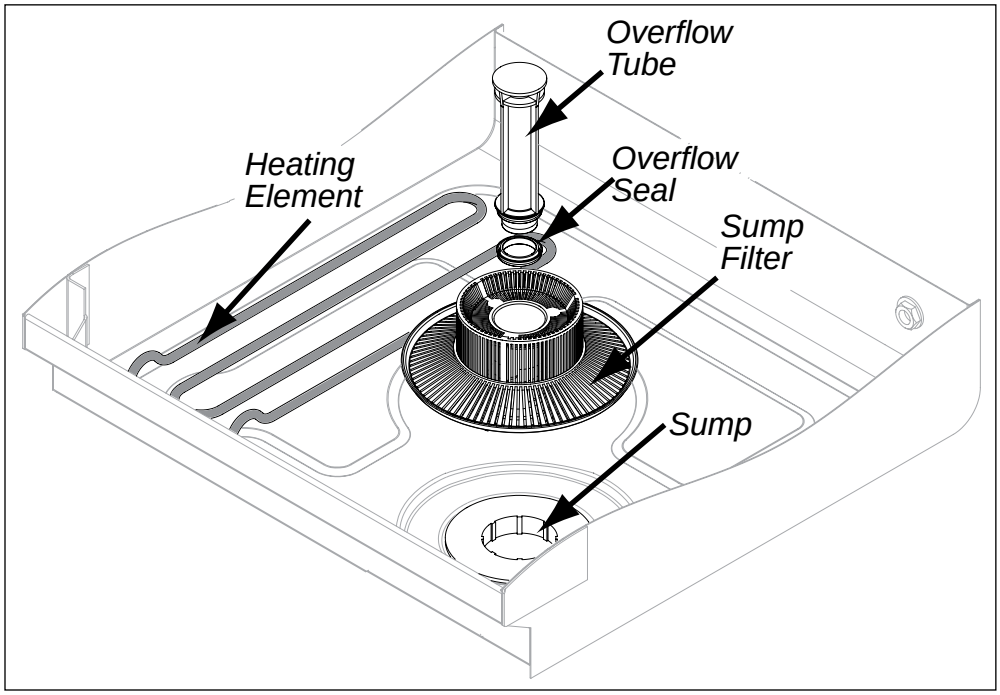
Danger:
Death or serious injury may result when de-liming solution is mixed with sodium hypochlorite *(chlorine bleach)* sanitizing agent. Mixing may cause hazardous gases to form.

De-liming solution and other acids must never be mixed with chlorine, iodine, bromine, or fluorine.

Caution:
Skin contact with de-liming solutions can cause severe irritation and possible chemical burns. Always wear protective clothing and goggles when handling chemicals.

Attention:
Contact your chemical supplier for specific safety procedures and instructions for the use of the de-liming solution supplied for the dishwasher.

De-liming solution or other chemicals are not supplied by the dishwasher manufacturer.



Maintenance

Follow the maintenance schedules below to keep the dishwasher operating most efficiently.

Daily Maintenance

1. Check all of the wash arm and rinse arm spray jets and clean as necessary.
2. Make sure the water supply is on and the drain is not clogged.
3. Check the temperature gauges and/or displays to ensure they are operating.
4. Make sure dish racks are in good condition.
5. Check the chemical containers and refill as required.
6. Follow the cleaning procedures given above.

Weekly Maintenance

1. Perform Steps 1-5 in the Daily Maintenance.
2. Inspect water lines for leaks.
3. Check for water leaks underneath the dishwasher.
4. Make sure the flexible water fill and drain hoses are not kinked.
5. Make sure the dishwasher is level.
6. Clean accumulated lime deposits from the wash tank heating element.
7. Inspect the scrap screen and replace it if damaged.
8. Check the spray arms and replace or repair if damaged.
9. Clean the chemical dispenser pick-up tubing for the detergent and rinse-aid pumps.

To clean the pick-up tubing:

1. Remove the pick-up tubes from their containers.
2. Place each tube in a separate container of hot water.
3. Press and hold the PRIME button up in the DET position until water flows into the wash tank compartment.
4. Press and hold the PRIME button down in the RINSE position until water flows into the wash tank compartment.
5. Return the pick-up tubes to their containers.
6. Run 3 empty dishwasher cycles to flush any chemicals from the dishwasher wash compartment.
7. Push and hold the chemical prime button to prime the chemical pumps.

Troubleshooting

Condition	Cause	Solution
Dishwasher will not run.	Door not closed. Main power OFF. Dishwasher OFF.	Close door completely. Check breaker on panel. Turn dishwasher ON.
Low or no water.	Main water supply off. PRV setting incorrect Solenoid strainer clogged. Solenoid valve defective.	Open supply valve. Adjust the PRV setting Clean strainer. Contact Service Agent.
Chemicals won't feed into dishwasher.	Chemical supply low. Pick-up tube clogged Supply tubing damaged. Supply tubing kinked.	Refill chemical container. Clean/replace tube. Replace tubing. Straighten tubing.
Poor wash results.	Wares incorrectly loaded. in dishrack. Clogged sump filter. Clogged spray arms. Detergent injector not feeding. Thermostat defective. Detergent motor defective. Wash temperature low.	Reposition wares or reduce amount of wares. Clean sump filter. Clean spray arms. Replace squeeze tube or clean tubing and pick-up tube. Contact Service Agent. Contact Service Agent Drain and refill wash tank and run 2 empty cycles. Contact service agent if problem persists.
Water has drained out of the wash tank while the dishwasher was idle.	Goose-neck loop in drain hose has been removed. Drain hose clamp is not holding the drain hose in proper position. Building plumbing does not provide correct air vent to prevent siphoning.	Re-route drain hose. DO NOT STRETCH HOSE Replace/Adjust hose clamp making sure goose-neck is maintained. Contact Service Agent and/or plumber.
Dishwasher stays in wash cycle.	Rinse Sentry extends wash mode to allow final rinse water booster temperature to reach 180˚F/82˚C.	Contact Service Agent because booster thermostat is defective.

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Service Replacement Parts

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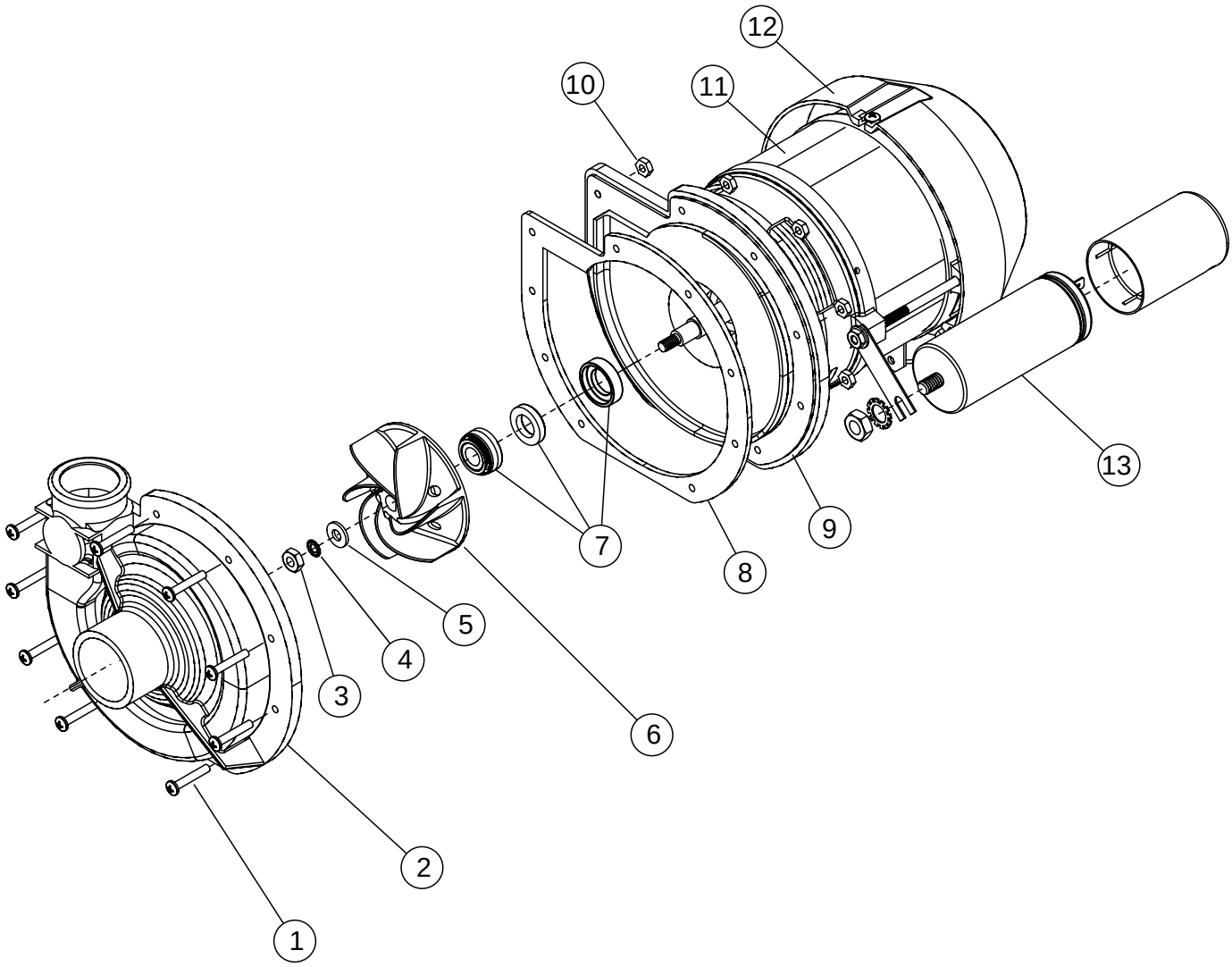
Door Assembly 46
Dish racks, Line Strainer and Pressure Regulating Vavle (PRV) 50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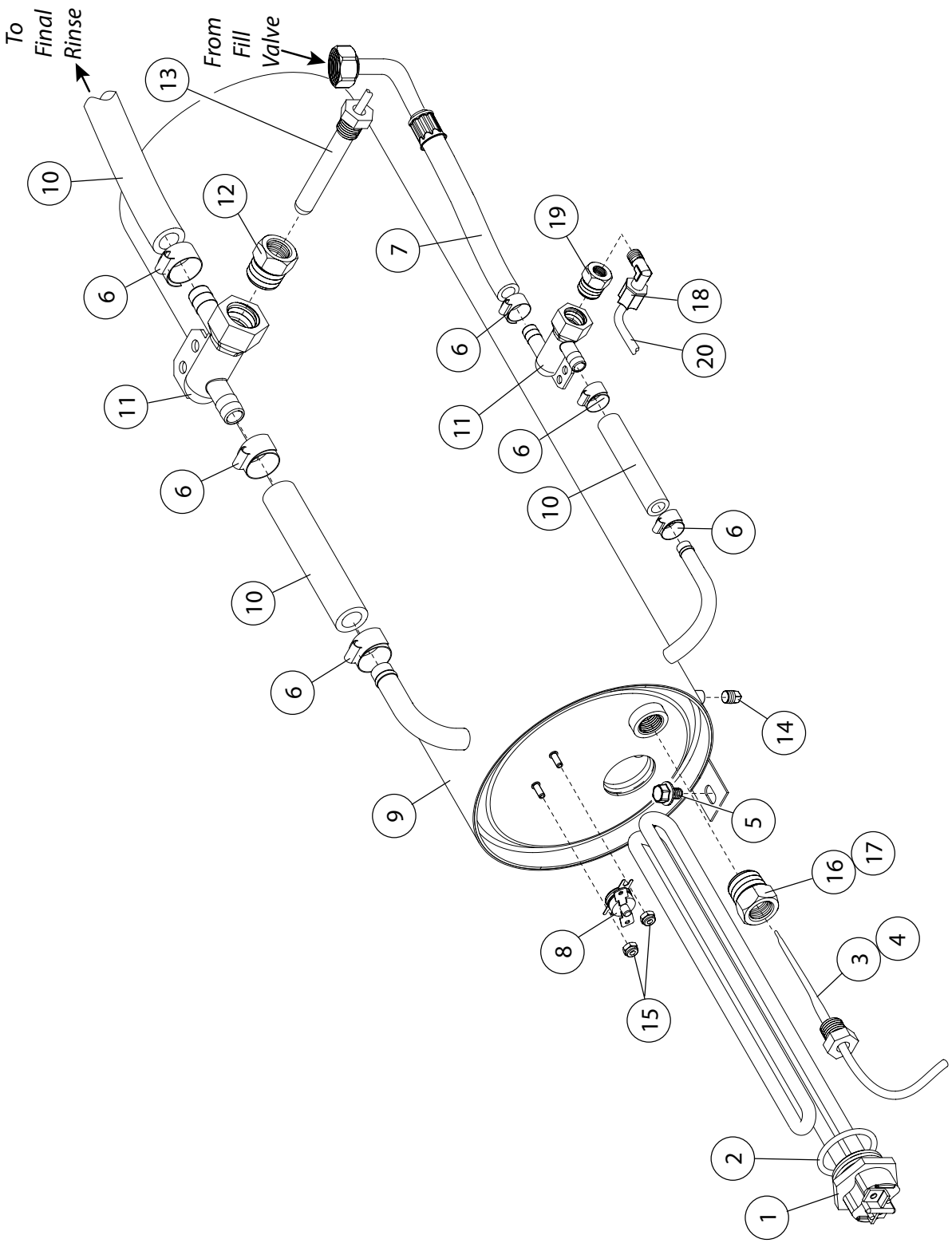
Item No.	Part No.	Description	Qty.
1	0512340	SCREW, M4, PHIL, PAN HD.	9
2	0512341	IMPELLER HOUSING COVER	1
3	114144	NUT, M6 (left-hand thread)	1
4	0501501	WASHER, LOCK, 1/4"	1
5	0501478	WASHER, PLAIN, 17/64"	1
6	0512345	IMPELLER	1
7	114139	SEAL, PUMP	1
8	110285	GASKET, PUMP	
9	114137	PLATE, PUMP BACKING	1
10	107337	NUT, M4	9
11	0512101-1	PUMP/MOTOR ASSEMBLY COMPLETE 220VAC/60/1	1
12	0513131	COVER, REAR MOTOR FAN	1
13	H29043	CAPACITOR 16*μF*	1


To Final Rinse
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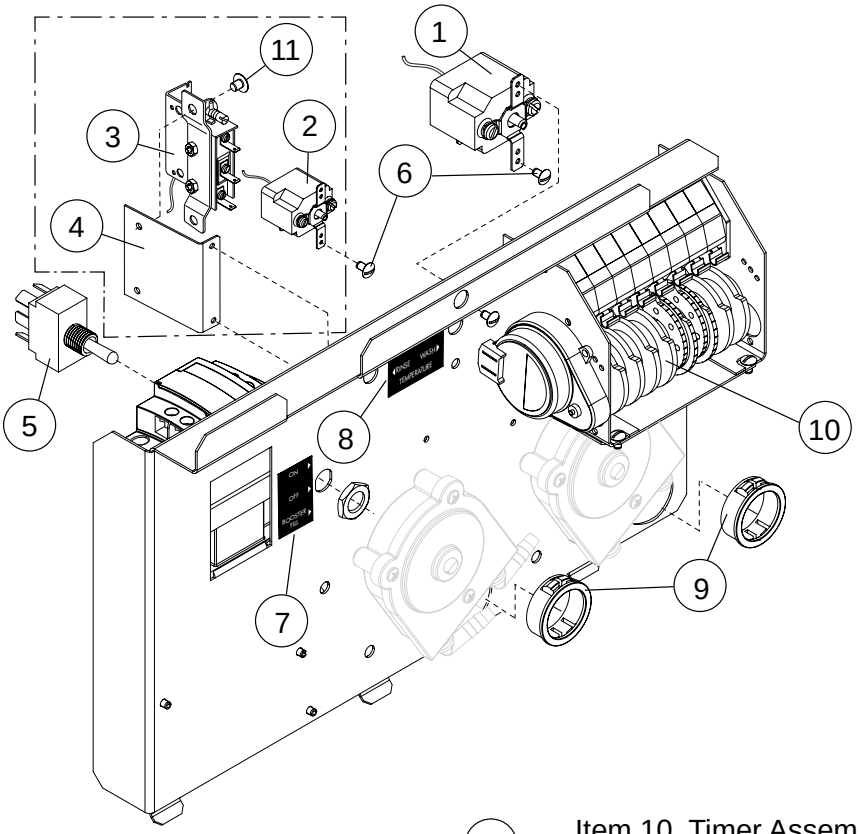
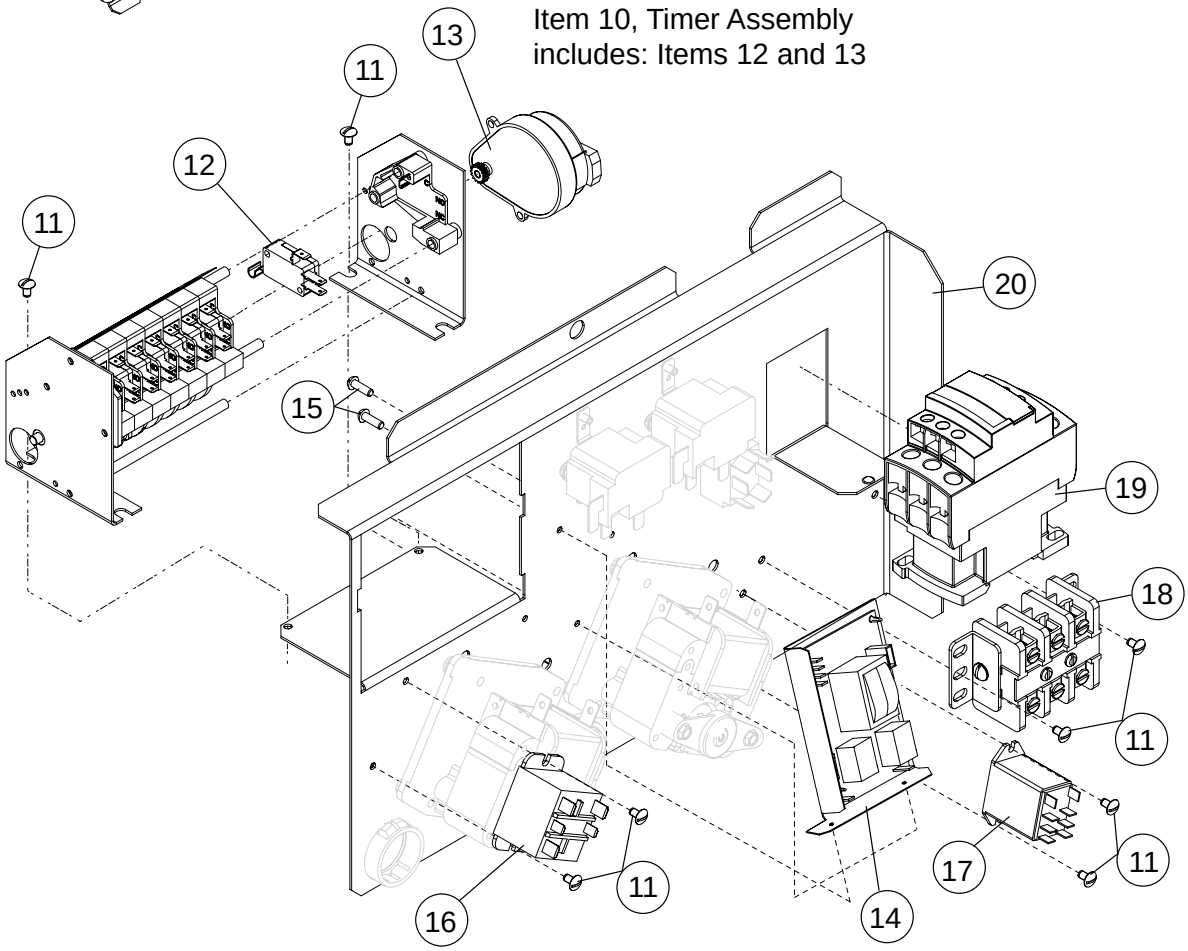
Item No.	Part No.	Description	Qty.
1	0512847	HEATER, BOOSTER 4kW, 208V, 40°F RISE *(Does not include gasket)*	1
1	0512848	HEATER, BOOSTER 6kW, 220V, 70°F RISE *(Does not include gasket)*	1
2	0512928	GASKET, BOOSTER HEATER	1
3	0512108	THERMOSTAT, CONTROL 195°F *(Prior to S/N W120330086)*	1
4	109069	THERMOSTAT, CONTROL 110-195°F *(Beginning with S/N W120330086)*	1
5	0512185	BOLT, HEX FLANGE, 1/4-20 X 3/8" SST	1
6	0512985	CLAMP, 29/32" x 1/2" WIDE SST	6
7	0512926	HOSE, BOOSTER FILL	1
8	110562	THERMOSTAT, HI-LIMIT FIXED SNAP 240°F	1
9	0712835	TANK, BOOSTER *(All S/N's)* *(Includes Item 14)*	1
10	107417	HOSE, 1/2" ID	A/R
11	0512857	TEE, RINSE THERMOMETER	2
12	0512941	FITTING, BOOSTER THERMOMETER	1
13	0512107	THERMOMETER, 2" DIAL, 7' CAPILLARY	1
14	0508817	PLUG, 1/8" SST	1
15	108954	NUT, GRIP 6-32 W/NYLON INSERT	2
16	0512920	FITTING, BOOSTER THERMOSTAT *(Use with Item 3, Prior to S/N W120330086)*	1
17	0512425	FITTING, BOOSTER THERMOSTAT *(Use with Item 3, Beginning with S/N W120330086)*	1
18	112728	FITTING, COMP. 1/4" OD X 1/8" MPT ELL J	1
19	0512298	BUSHING, REDUCER 1/2" X 1/8"	1
20	107928	TUBING, 1/4" NATURAL	2 FT.

Electrical Panel and Timer Assembly

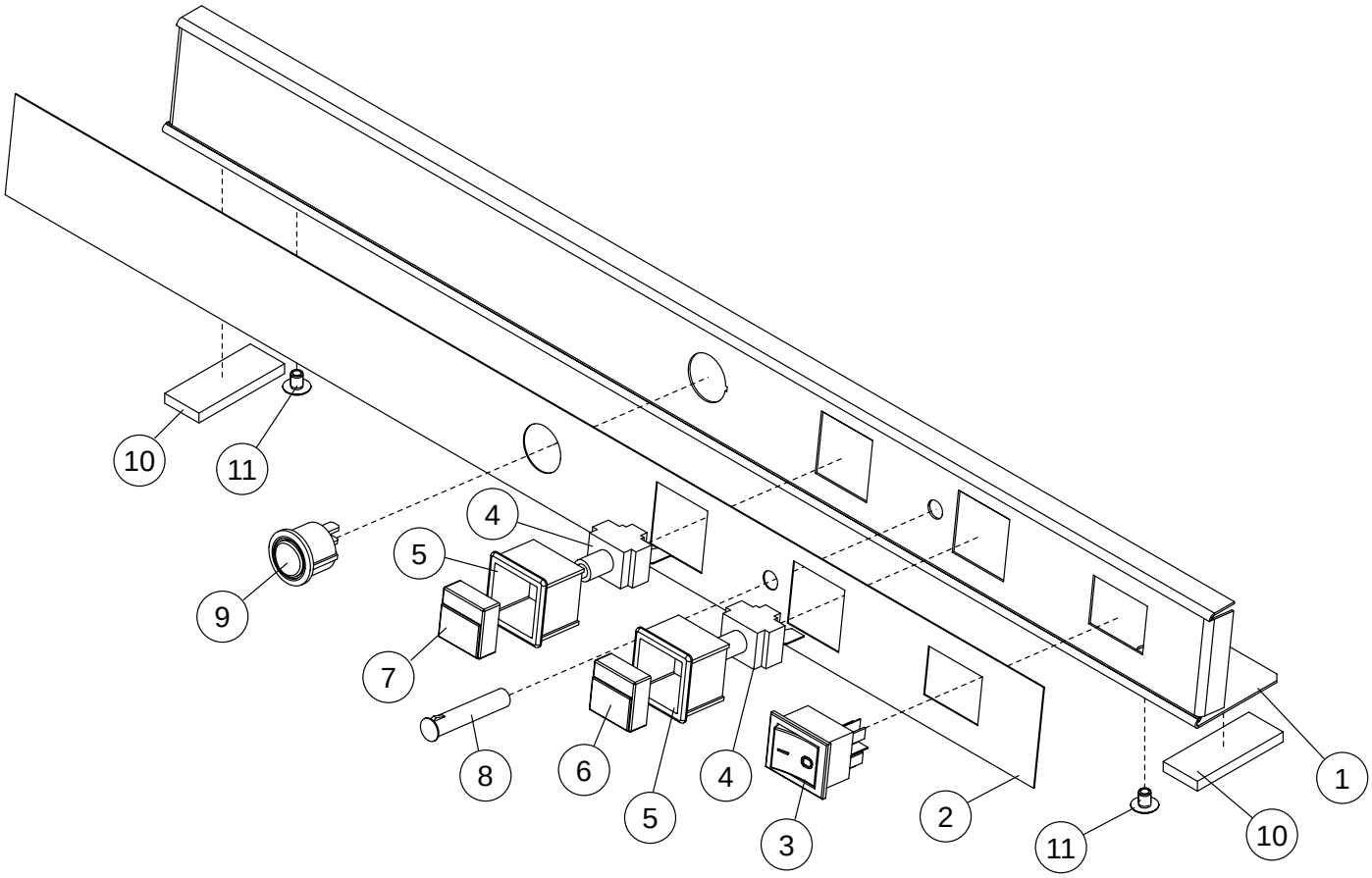


Item 10, Timer Assembly
includes: Items 12 and 13



Item No.	Part No.	Description	Qty.
1	0507323	THERMOSTAT, WASH TANK	1
2	0512108	THERMOSTAT, CONTROL 195°F *(Prior to S/N W120330086)*	1
3	109069	THERMOSTAT, CONTROL 110-195°F *(Beginning with S/N W120330086)*	1
4	0313481	BRACKET, THERMOSTAT *(Use with Item 3 only)*	1
5	0501373	SWITCH, 3-POSITION, TOGGLE	1
6	0501450	SCREW, NIBS RH 6-32 X 3/16" PHIL. SST	4
7	0512935	LABEL, ON/OFF/BOOSTER FILL	1
8	0512934	LABEL, WASH-RINSE TEMPERATURE	1
9	0512875	BUSHING, 1" ID	2
10	0512862	ASSEMBLY, TIMER (Includes Items 12, 13)	7
11	0501408	SCREW, TRUSS SLOT, 8-32 X 1/4" SST	10
12	0501379	SWITCH, TIMER	7
13	0512915	MOTOR, TIMER *(Not available seaparately, order Item 10)*	N/A
14*	0713133*	KIT, FILL/DRAIN TIMER *(All S/N's)*	1
15	0503620	SCREW, RH 4-40 X 3/16" SLOTTED SST	4
16	0509428	RELAY, 15 AMP, 120VAC COIL	1
17	111068	RELAY, 120VAC, 2PDT	1
18	0504951	BLOCK, TERMINAL	1
19	0512432	CONTACTOR, 25/40A, 3P, 120V COIL	1
20	0312909	PANEL, CONTROL	1

* Note: See Kit Installation Instructions at the end of this manual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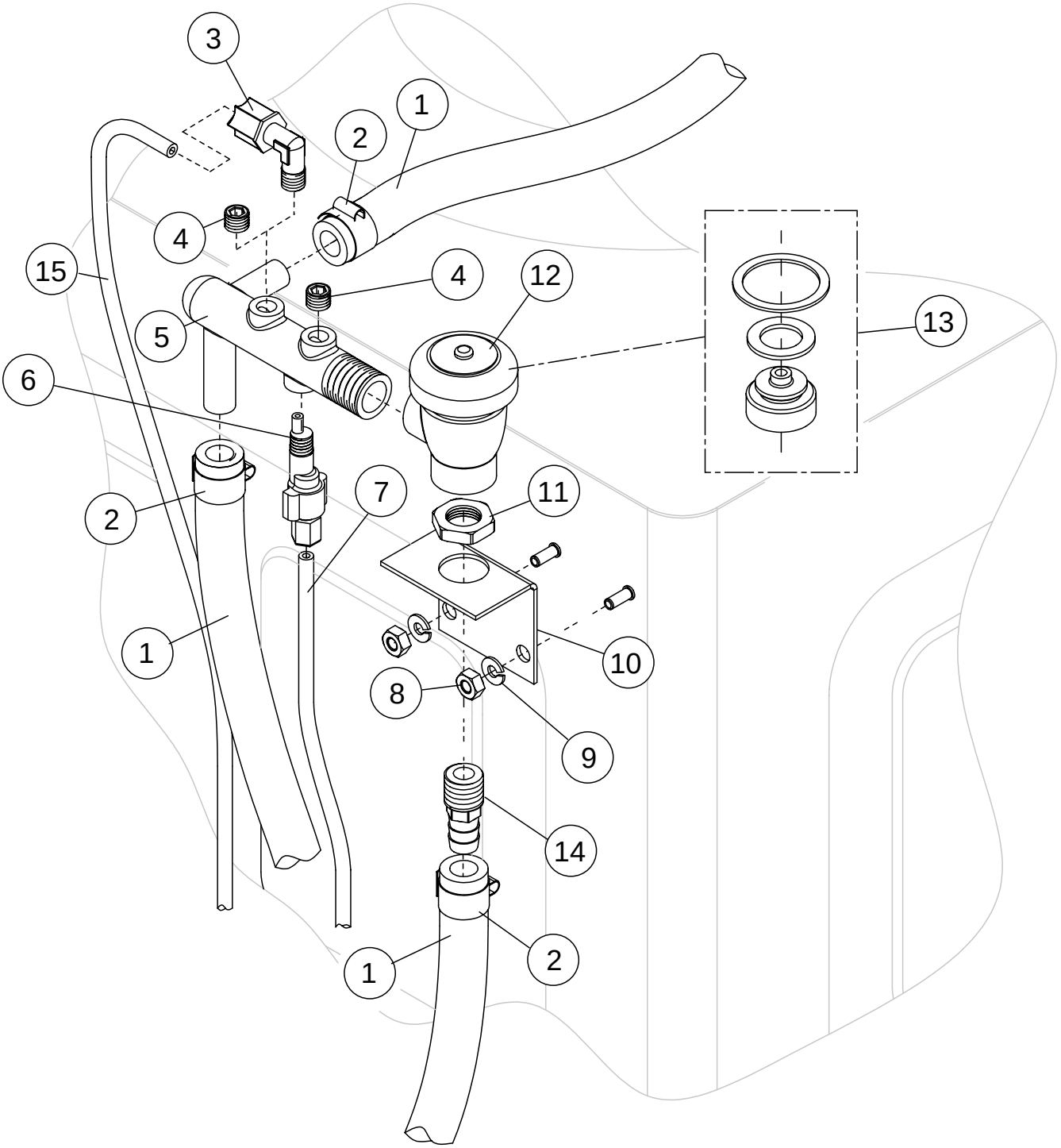
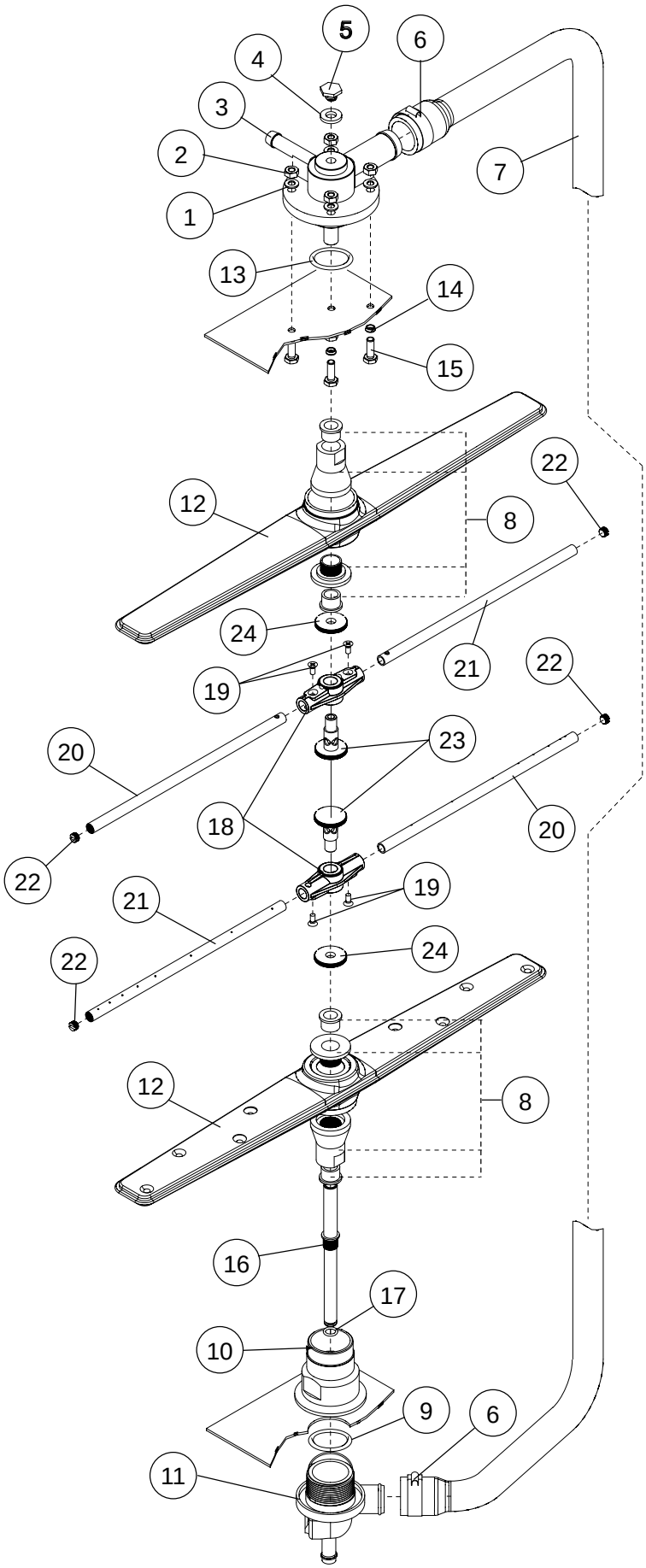
Item No.	Part No.	Description	Qty.
1	0312902	PANEL, FACIA, 351	1
2	0512859	LABEL, FACIA, 351	1
3	0512922	SWITCH, ON-OFF	1
4	0512216	CONTACT, MOMENTARY, N.O.	2
5	0512217	HOUSING, SWITCH	2
6	0512218	BUTTON, SWITCH (GREEN)	1
7	0512219	BUTTON, SWITCH (GREY)	1
8	0512921	LIGHT, INDICATOR LED, 125VAC (GREEN)	1
9	0512226	SWITCH, MOMENTARY (PRIME)	1
10	0512320	GASKET, STEAM	2
11	0501408	SCREW, TRUSS SLOT., 8-32 X 1/4" SST	2

Upper Final Rinse Piping Assembly



Item No.	Part No.	Description	Qty.
1	107417	HOSE, RUBBER 1/2ID X .84OD	AR
2	0503679	CLAMP, SS GEAR-MIN. 5/16-MAX.7/8	6
3	112728	FITT COMP 1/4OD X 1/8MPT ELL J *(Prior to S/N W12033086)*	1
4	0508817	PLUG, 1/8 HEX COUNTERSUNK *(Beginning with S/N W12033086)*	1
5	0513110	MANIFOLD, RINSE	1
6	112763	INJECTOR FITTING	1
7	112883-1	TUBING, 1/8OD X 1/16 ID	AR
8	100003	NUT, HEX SS 1/4-20	2
9	0501501	WASHER, SPLIT LOCK 1/4i 304SS	2
10	0312190	BRACKET, VACUUM BREAKER	1
11	201029	NUT, LOCK 1/2" NICKEL PLATED	1
12	100500	VACUUM BREAKER, 1/2" BRONZE	1
13	0508366	REPAIR KIT, VACUUM BREAKER 1/2"	1
14	0502651	COUPLER 1/2 MPT X 1/2" HOSE	1
15	107928	TUBING, 1/4" NATURAL *(Prior to S/N W12033086)*	AR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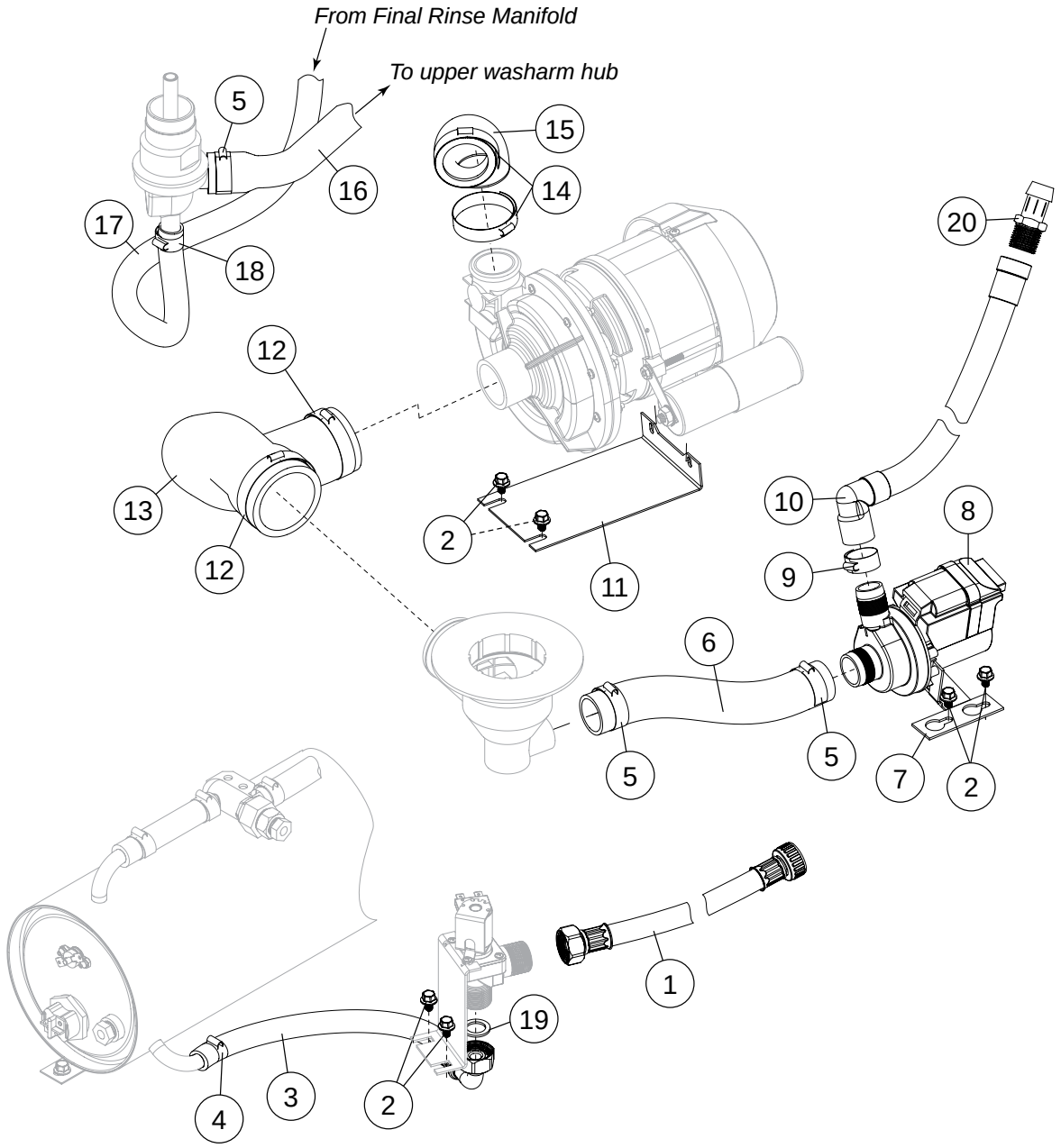
Item No.	Part No.	Description	Qty.
1	0501478	WASHER, 17/64 id X 9/16" OD SST	4
2	107967	NUT, HEX 1/40-20 NYLON INSERT SST	4
3	H35509	HUB, UPPER WASH ARM	1
4	107873	WASHER, PACKING	1
5	110215	SCREW, RETAINING	1
6	0502571	CLAMP, HOSE GEAR 1-1/2" SST	2
7	0512120	HOSE, UPPER WASH ARM	1
8*	0712749	BEARING ASSEMBLY	2
9	0512133	O-RING, 2-1/8" OD X 1-3/4" ID X 3/16"	1
10	0512066	HUB, LOWER WASH ARM	1
11	0512918	MANIFOLD, LOWER FWR	1
12	H420548	WASH ARM ASSEMBLY *(Includes Item 8)*	2
13	0512133	O-RING, 2-1/8" OD X 1-3/4" ID X 3/16"	1
14	0501481	WASHER, NYLITE	4
15	100738	BOLT, 1/4-20 X 1" SST	4
16	0512124	SHAFT, LOWER	1
17	0512239	O-RING	1
18	0312840	HUB, RINSE ARM, MOLDED	2
19	0501408	SCREW, TRUSS SLOTTED 8-32 X 1/4" SST	4
20	0512841	ARM, RIGHT-HAND RINSE (7 JETS)	2
21	0512842	ARM, LEFT-HAND RINSE (8 JETS)	2
22	0512843	CAP, RINSE ARM, 5/16-24	4
23	H36275	SPINDLE, RINSE ARM	2
24	H34998	SPACER, NUT	2
---	0712834	RINSE ARM ASSEMBLY *(Includes Items 18-24)*	2

** Note:*
The bearing assembly, P/N 0712749 includes 2 bearings, 1 locknut, and 1 wash arm hub.
The bearings, locknut and hub are not available as separate service replacement parts.

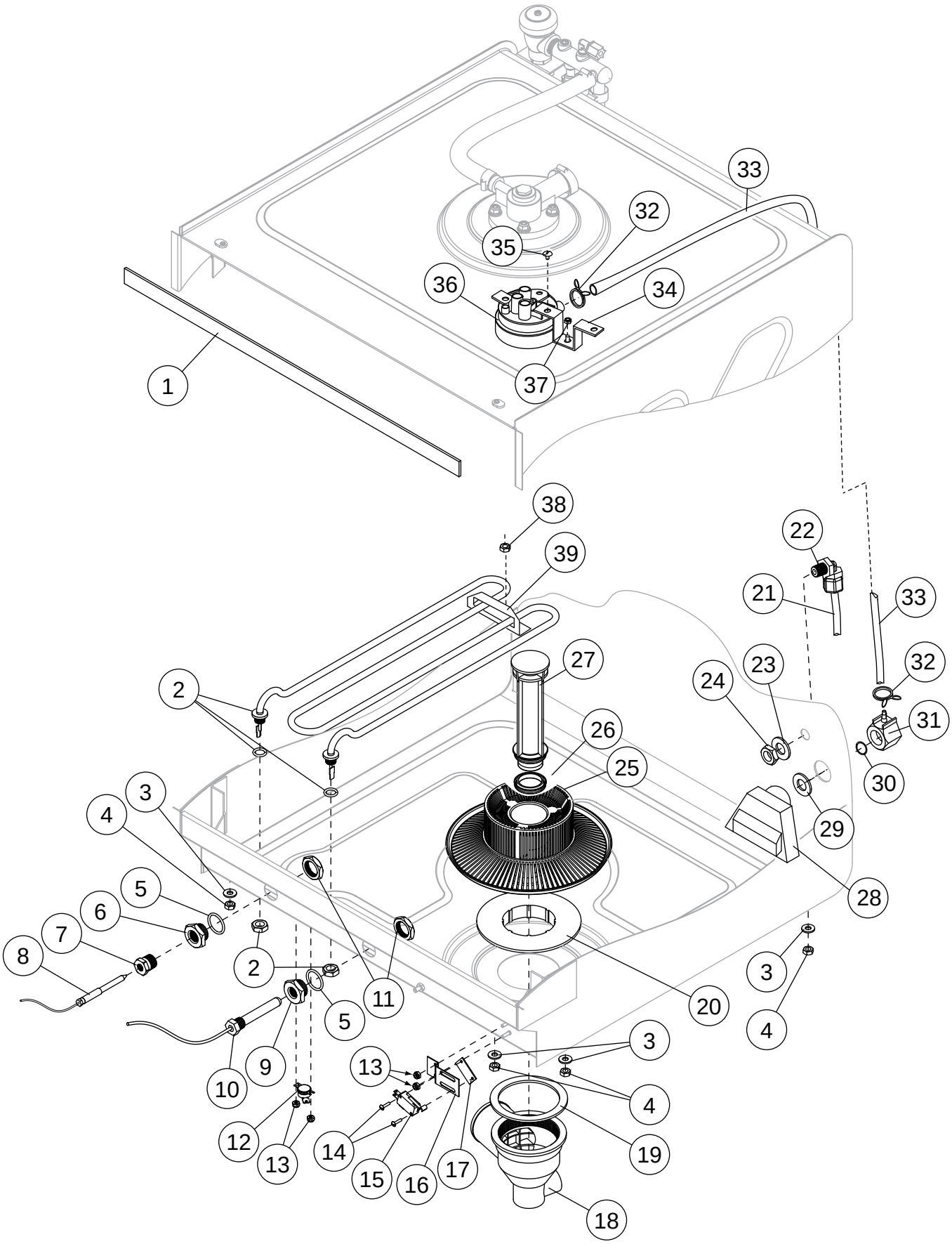
Drain Pump and Lower Hose Assembly



Item No.	Part No.	Description	Qty.
1	0512925	HOSE, FILL 1/2" X 7' C/W 3/4" FNPS	1
2	0512185	BOLT, HEX FLANGE, 1/4-20 X 3/8" SST	6
3	0512926	HOSE, BOOSTER FILL, 1/2" X 1'	1
4	0502572	CLAMP, HOSE GEAR-TYPE 5/16"	1
5	0502563	CLAMP, HOSE GEAR-TYPE, 1", SST	2
6	0502668	HOSE, DRAIN PUMP SUCTION	1
7	0312145-1	BRACKET, DRAIN PUMP	1
8	0512227	PUMP, DRAIN 115VAC	1
9	0508808	CLAMP, HOSE GEAR-TYPE SST	1
10	0512929	HOSE, DRAIN	1
11	0312144	BRACKET, WASH PUMP	1
12	0512322	CLAMP, HOSE GEAR-TYPE 1-13/16"- 2-3/4" MAX SST	2
13	0512855	HOSE, SUCTION WASH PUMP	1
14	0502571	CLAMP, HOSE GEAR-TYPE, 1-1/2", SST	2
15	0512119	HOSE, DISCHARGE WASH PUMP	1
16	0512120	HOSE, UPPER WASH ARM	1
17	107417	HOSE, RUBBER 1/2" 1D X .84" OD	A/R
18	0503679	CLAMP, HOSE GEAR-TYPE	1
19	0512936	WASHER, SILICON, 5/8" ID X 7/8" OD	1
20*	0512231	COUPLER, 3/4" MPT X 3/4" HOSE BARB	1

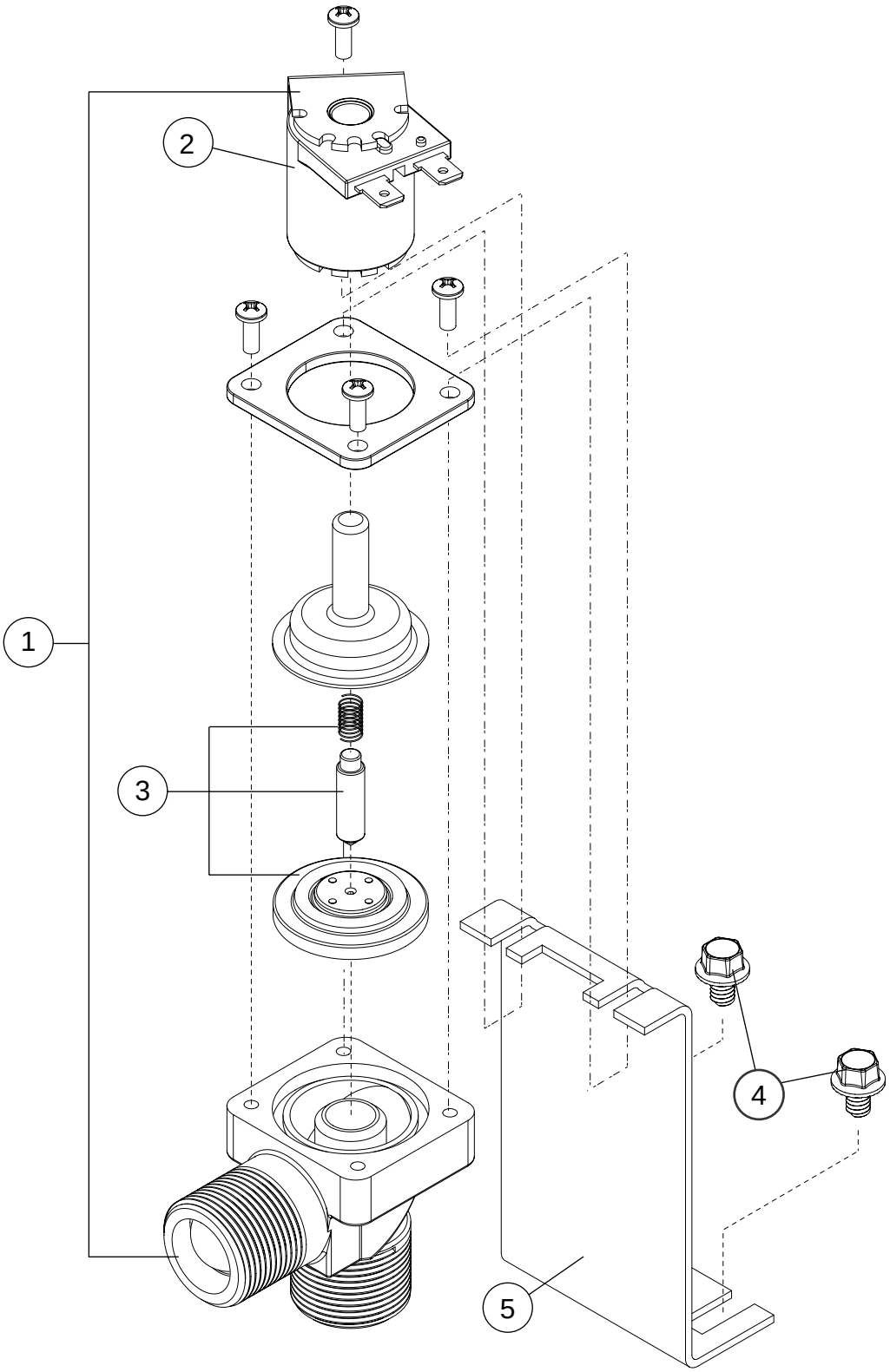
*** NOTE:**
Item No. 20 is strapped to the drain hose as a separate part for the plumbing installer to use during installation.

Wash Tank Heater and Drain Assembly



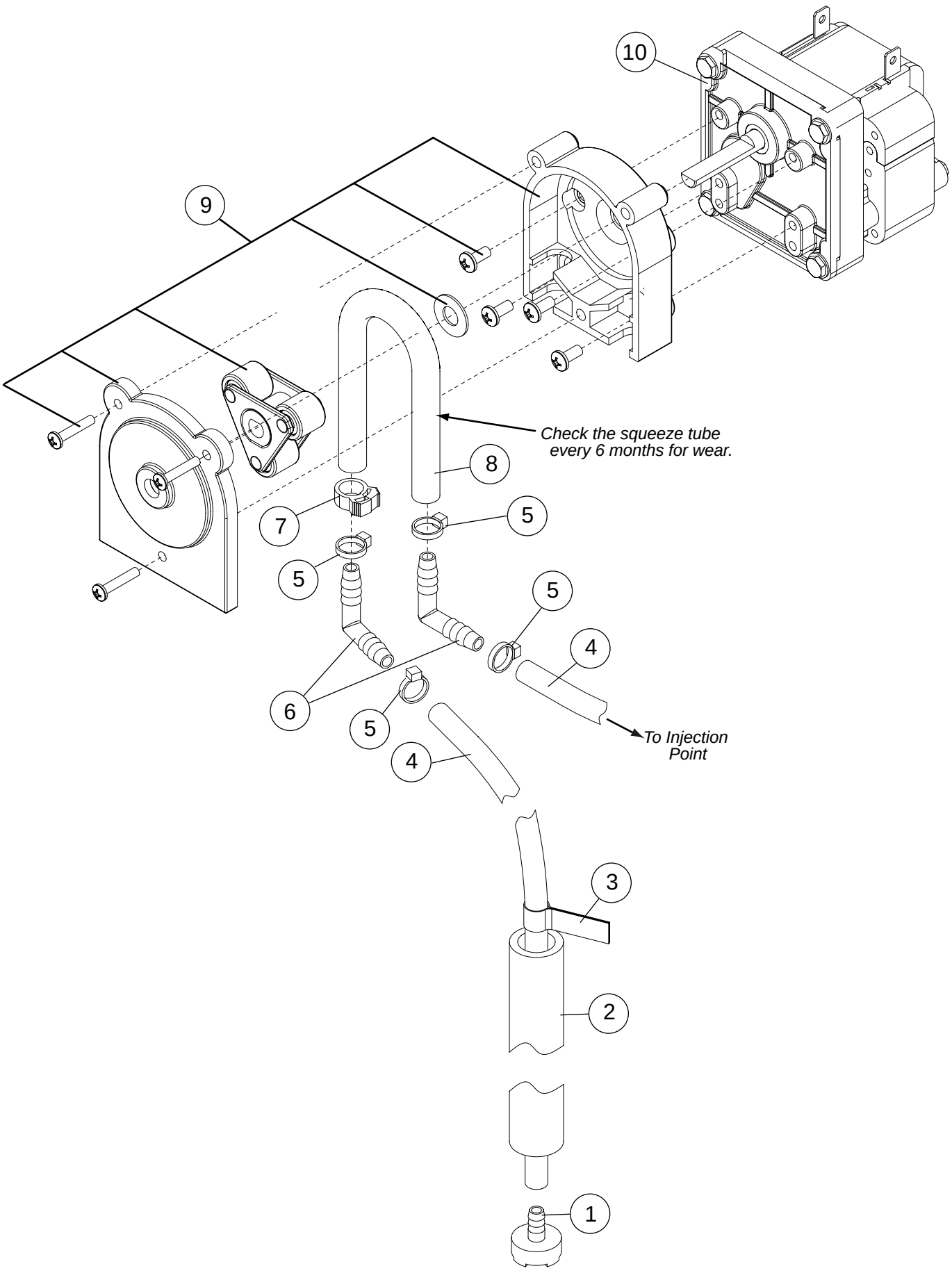
Item No.	Part No.	Description	Qty.
1	0512930	GASKET, DOOR	1
2	0512846	HEATER, WASH TANK, 2KW, 240VAC	1
3	100003	WASHER, SPLIT LOCK 1/4" SST	4
4	0501539	NUT, HEX 1/4-20 SST	4
5	0501836	O-RING	2
6	0508873	ADAPTER, THERMOSTAT	1
7	0512920	BUSHING, THERMOSTAT *(Use with Item 8)*	1
8	0507323	THERMOSTAT, WASH TANK	1
9	0508872	ADAPTER, THERMOMETER	1
10	0512107	THERMOMETER, 2" DIAL C/W 7' CAPILLARY	1
11	201029	NUT, LOCK 1/2" NICKLE-PLATED	2
12	113604	THERMOSTAT, FIXED, SNAP 212°F	1
13	108954	NUT, GRIP 6-32 W/NYLON INSERT	4
14	0501437	SCREW, 4-40 X 1/2" SST	2
15	0501379	SWITCH, DOOR 15 AMP	1
16	0309228	BRACKET, SWITCH	1
17	0312605	PLATE, SWITCH NUT	1
18	D500605	ELBOW, PUMP SUCTION	1
19	D80208	GASKET, PUMP SUCTION	1
20	D540088	FLANGE, PUMP SUCTION	1
21	0502667	HOSE, 1/4" ID X 3/8" OD	A/R
22	0510881	ELBOW, 3/8" TUBE X 1/4" NPT	1
23	110750	GASKET, 1/4" FIBER	1
24	110856	LOCKNUT, 1/4" PLASTIC	1
25	0512845	SCREEN, SCRAP MOULDED	1
26	0512879	SEAL, OVERFLOW TUBE	1
27	0512844	TUBE, OVERFLOW	1
28	H25010	TRAP, AIR	1
29	H25263	GASKET, AIR TRAP	1
30	H25239	ORING, NUT, AIR TRAP	1
31	H25011	NUT, AIR TRAP	1
32	H450134	CLAMP, HOSE AIR	2
33	H160121	HOSE, AIR	4 FT.
34	0313587	BRACKET	1
35	0512978	SCREW, 6-18 X 1/4" PAN HD. PHIL.	1
36	H31171	SWITCH, PRESSURE	1
37	0503580	NUT,10-32 KEPS	1
38	107967	NUT, 1/4" GRIP W/ NYLON INSERT	1
39	0313691	BRACKET, HEATER	1

Fill Solenoid Valve Assembly

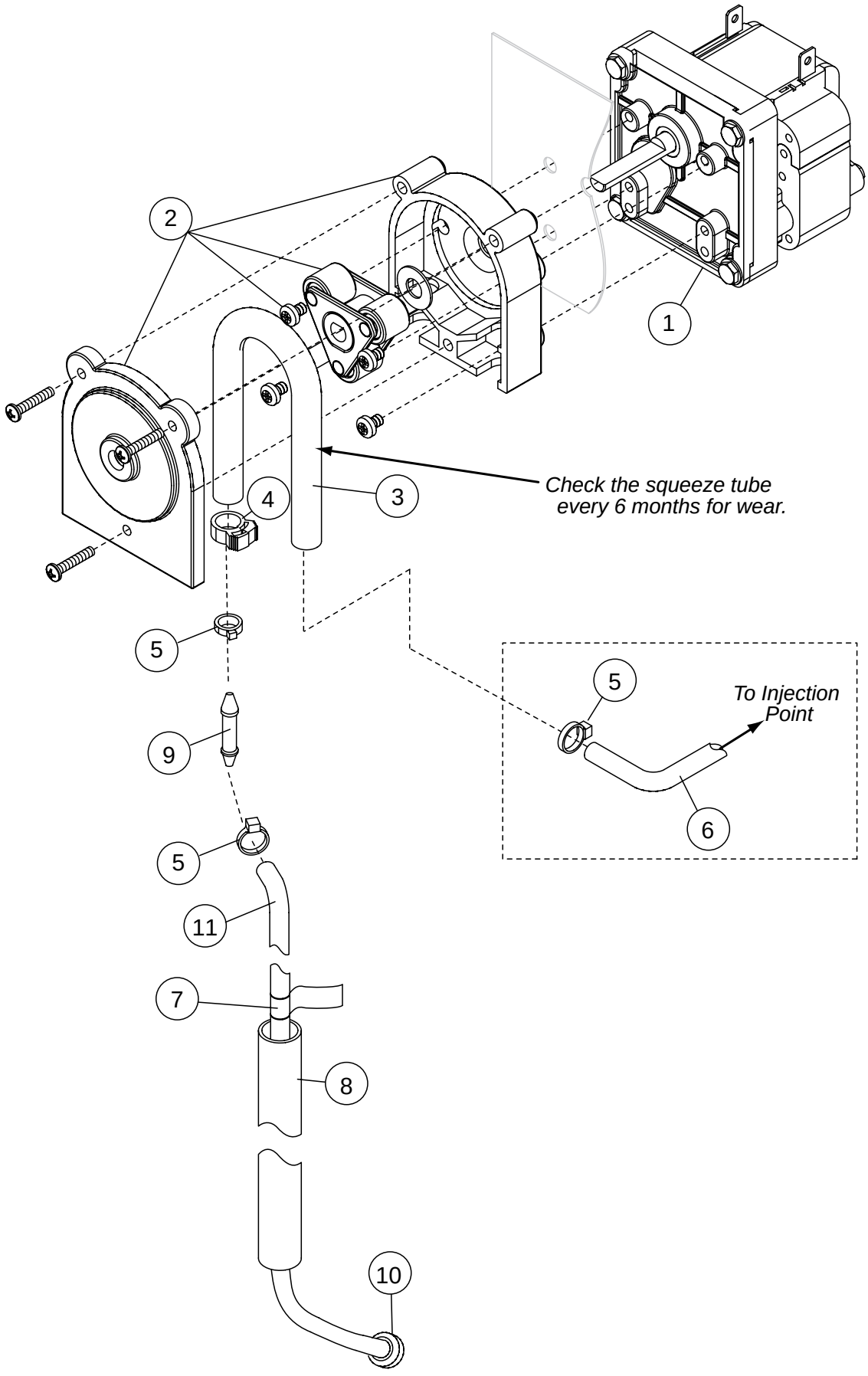


Item No.	Part No.	Description	Qty.
1	0512853	VALVE, WATER INLET 115VAC/60/1 *(Includes Items 2 and 3)*	1
2	0512861	COIL, 115VAC/60/1 7W	1
3	0512860	KIT, REPAIR SOLENOID VALVE	A/R
4	0512185	BOLT, HEX FLANGE 1/4-20 X 3/8" SST	2
5	0312893	BRACKET, VALVE	1

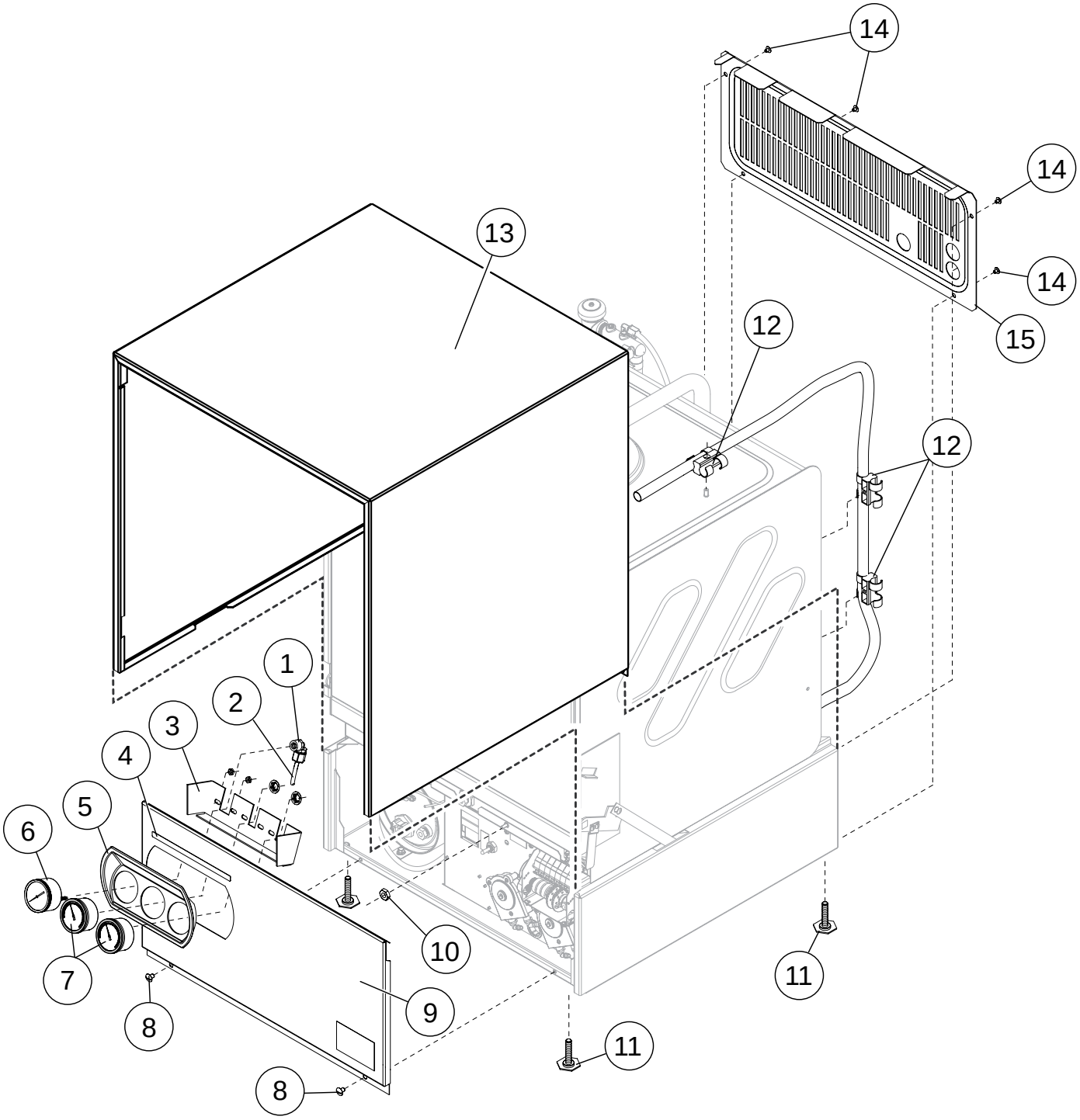
Detergent Pump Assembly



Item No.	Part No.	Description	Qty.
1	0501869	STRAINER	1
2	0306363	TUBE,1/2IDX11-7/8LG. STIFFENER	1
3	0503695	LABEL, DETERGENT	1
4	0502667	HOSE, 1/4ID X 3/8OD PVC	A/R
5	0501519	TIE, NYLON 4"	4
6	0502644	ELBOW, 1/4 HOSE BARB	1
7	0512369	CLAMP, SNAP HOSE	1
8	114202	TUBE ASY,SANTOPRENE, 3/16 X 3/8 X 8.5 LG	1
9	114203	PUMP HD KIT, PERISTALIC	1
10	0510870-1	GEARMOTOR, 115/60/1	1


2
1
Check the squeeze tube
every 6 months for wear.
4
3
5
9
5
11
7
8
10
5
To Injection
Point
6

Item No.	Part No.	Description	Qty.
1	0510872-1	GEARMOTOR, RINSE-AID 115/60/1	1
2	0512325	PUMP HEAD, PERISTALTIC	1
3	112759	TUBE, PUMP 1/8" ID X 9" LG.	1
4	0512369	CLAMP, HOSE	1
5	0501519	TIE, CABLE 4"	4
6	112883-1	TUBING, 1/8" OD X 1/16" ID	A/R
7	0505483	LABEL, RINSE AID	1
8	0306363	TUBE, 1/2" ID X 11-7/8 LG. STIFFENER	1
9	0512794	CONNECTOR, 5/32" X 1/8"	1
10	0501869	STRAINER	1
11	0502666	HOSE, 1/8" ID X 1/4" OD PVC BEVERAGE	6FT


14
14
14
15
13
12
12
1
2
3
4
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7
8
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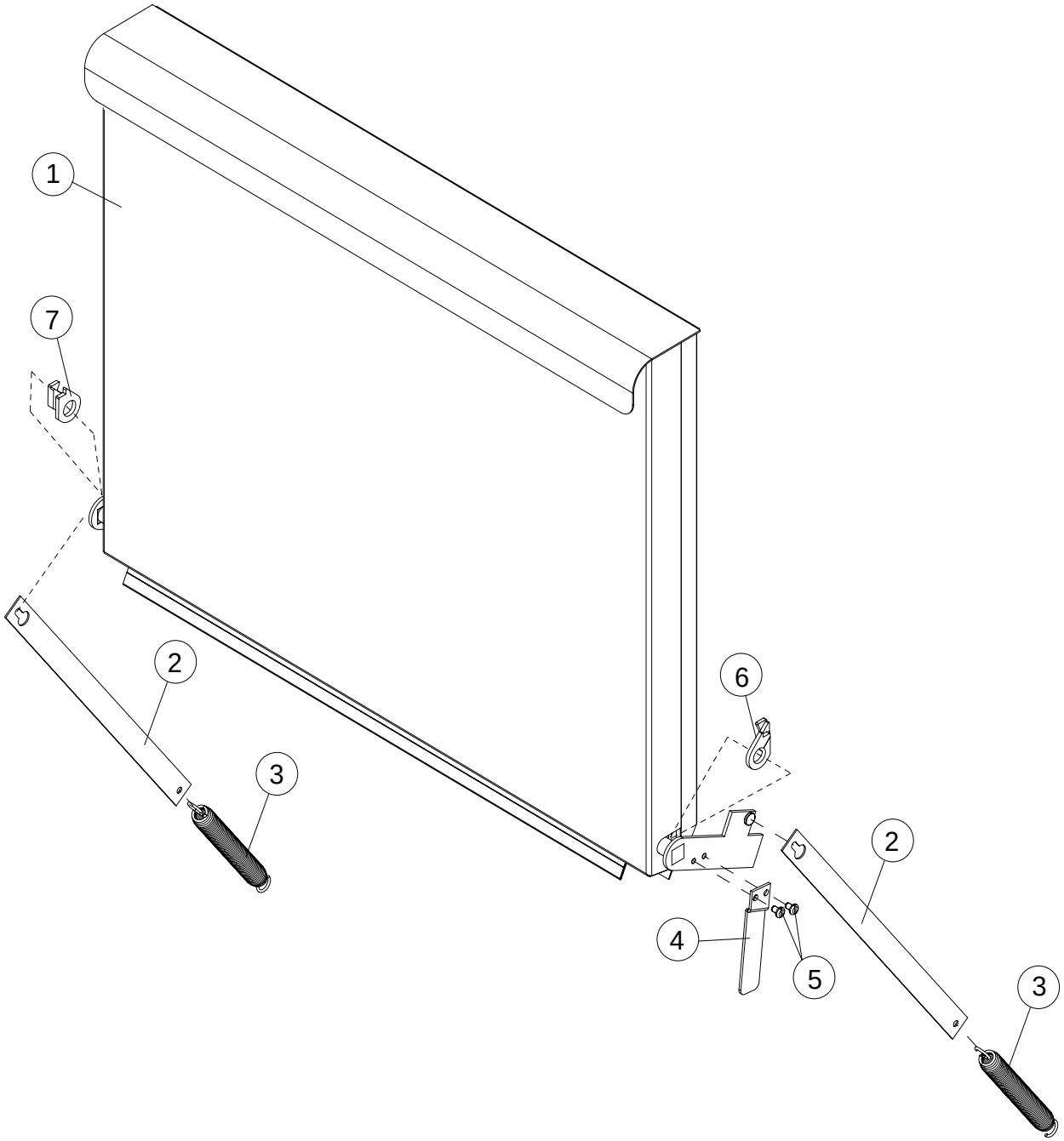
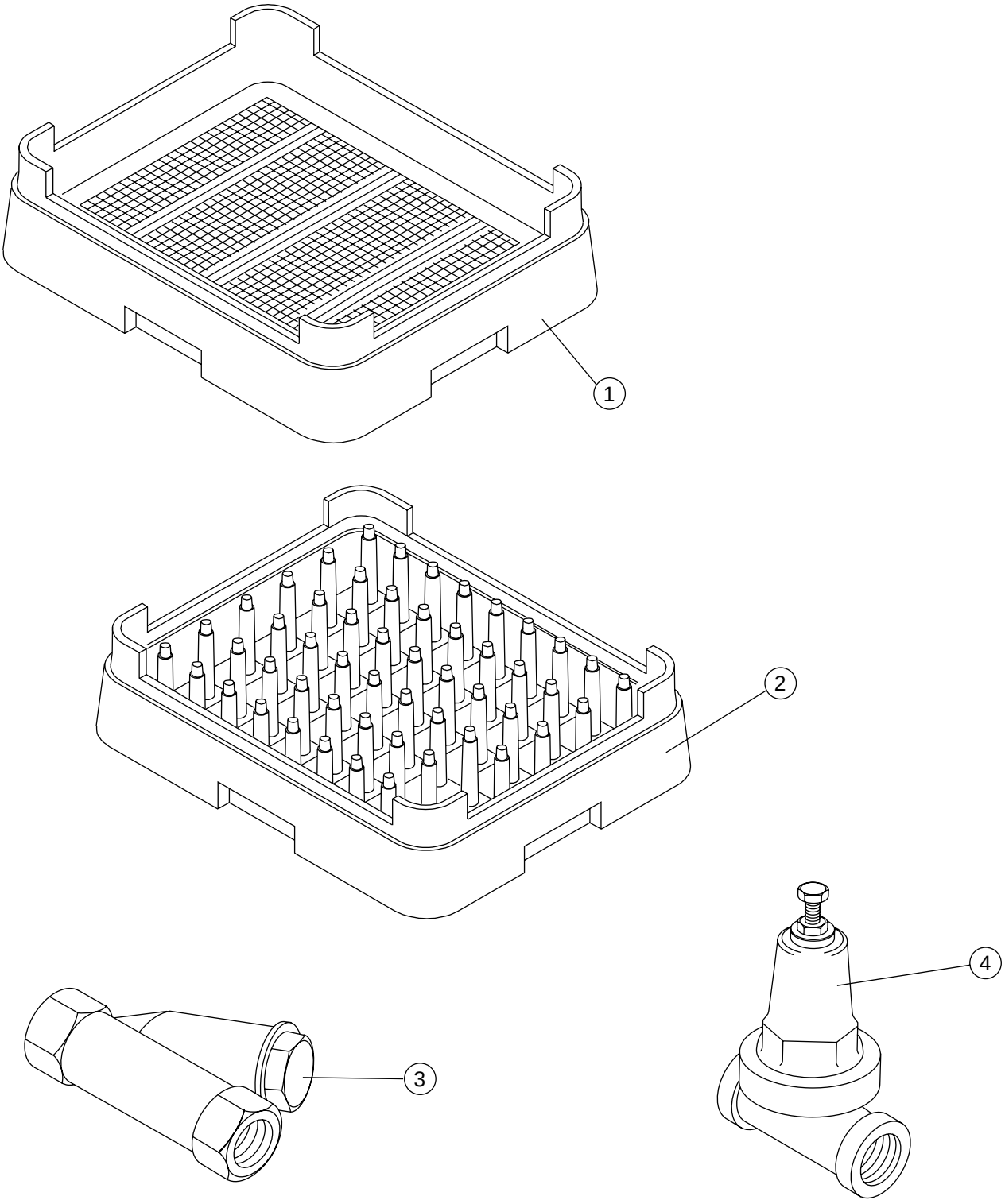
11
11

Item No.	Part No.	Description	Qty.
1	111100	ADAPTOR, 1/4" X 1/8" NPT FEMALE PLASTIC	1
2	107928	TUBING, 1/4" NATURAL	A/R
3	0312907	BRACKET, GUAGE	1
4	0512931	LABEL, GUAGE	1
5	0512874	HOLDER, GUAGE	1
6	109812	GAUGE, PRESSURE 0-60PSI	1
7	0512107	THERMOMETER, 2" DIAL, 7' CAPILLARY	2
8	100779	SCREW, 1/4-20 X 5/8" TRUSS HD. PHIL. SST	2
9	0312899	PANEL, FRONT 351HT	1
10	0503580	NUT, KEPS, 10-32 SST	1
11	0503718	FOOT, ADJUSTING	4
12	0512761	CLAMP, DOUBLE CONDUIT	3
13	0312905	WRAP, OUTER PANEL	1
14	100007	SCREW TRUSS SLOT SS 10-32X3/8	4
15	0312924	PANEL, REAR	1
NS	0512939	LABEL, ENERGY STAR	1


1
7
2
3
6
2
4
5
3

Item No.	Part No.	Description	Qty.
1	0713141	DOOR WELDED ASSY	1
2	0312892	ARM, DOOR SPRING	2
3	0512854	SPRING, DOOR	2
4	0312908	ACTUATOR, DOOR SWITCH	1
5	0503745	SCREW, 8-32 X 3/16" PHIL. SST	2
6	0512953	SEAL, DOOR DRIP, RH	1
7	0512954	SEAL, DOOR DRIP, LH	1


1
2
3
4

Item No.	Part No.	Description	Qty.
1	101273	DISH RACK, FLAT-BOTTOM	AR
2	101285	DISH RACK, PEG	AR
3	104421	STRAINER, LINE 1/2" BRONZE (OPTIONAL)	1
4	108265	VALVE, PRESSURE REGULATING, 1/2"	1

Electrical Schematic,Timer Chart

Illustrations ***Page***

Model 351HT Electrical Schematic *(Beginning with S/N W150551128 and above)* 51
Model 351HT Electrical Schematic (Prior to S/N W150551128) 52
Timer Chart..... 53

Fill/Drain Timer

Illustrations ***Page***

Theory of Operation..... 64

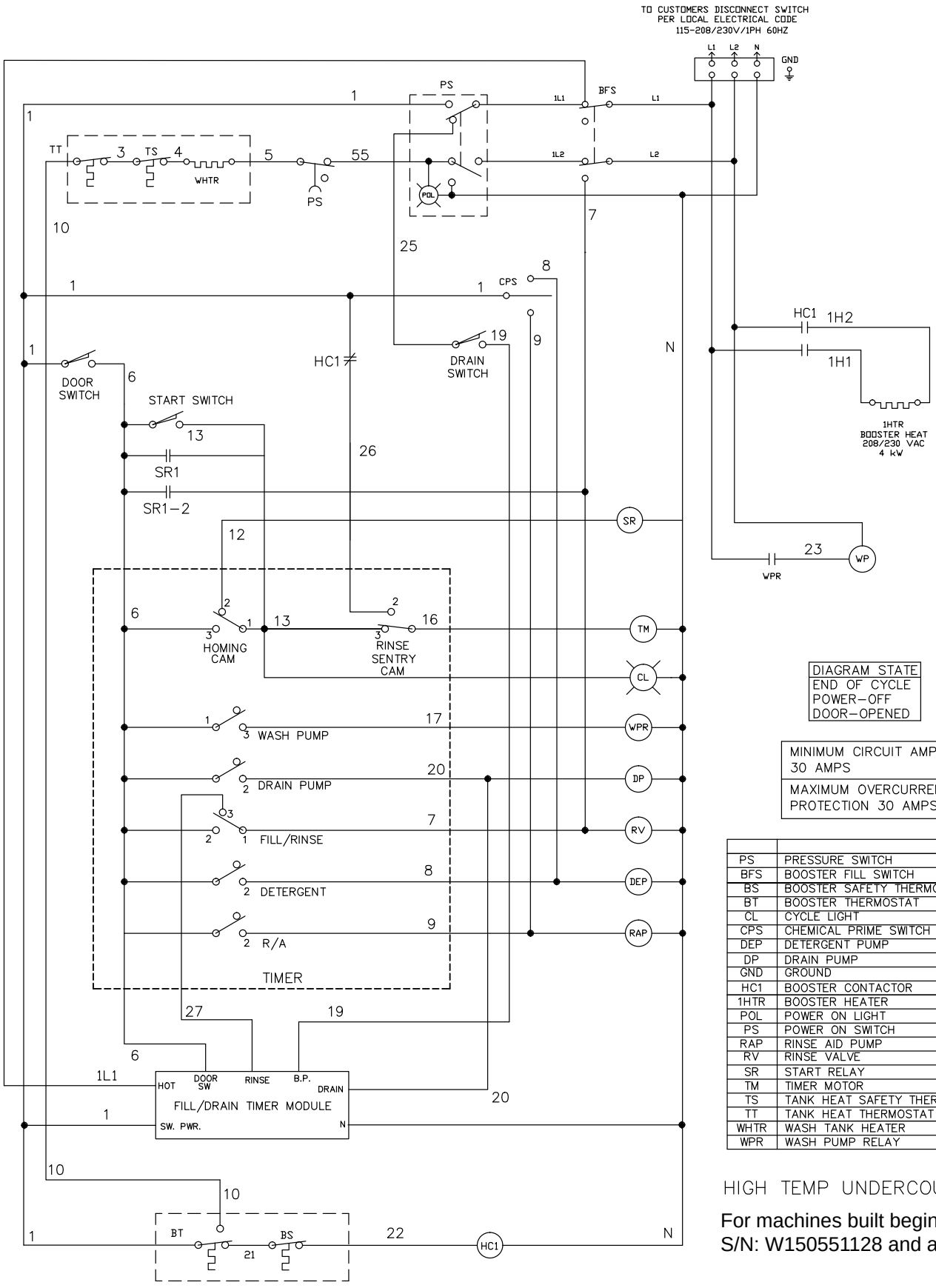


DIAGRAM STATE
END OF CYCLE POWER–OFF DOOR–OPENED

MINIMUM CIRCUIT AMPACITY 30 AMPS
MAXIMUM OVERCURRENT PROTECTION 30 AMPS

PS	PRESSURE SWITCH
BFS	BOOSTER FILL SWITCH
BS	BOOSTER SAFETY THERMOSTAT
BT	BOOSTER THERMOSTAT
CL	CYCLE LIGHT
CPS	CHEMICAL PRIME SWITCH
DEP	DETERGENT PUMP
DP	DRAIN PUMP
GND	GROUND
HC1	BOOSTER CONTACTOR
1HTR	BOOSTER HEATER
POL	POWER ON LIGHT
PS	POWER ON SWITCH
RAP	RINSE AID PUMP
RV	RINSE VALVE
SR	START RELAY
TM	TIMER MOTOR
TS	TANK HEAT SAFETY THERMOSTAT
TT	TANK HEAT THERMOSTAT
WHTR	WASH TANK HEATER
WPR	WASH PUMP RELAY

HIGH TEMP UNDERCOUNTER

For machines built beginning with S/N: W150551128 and above.

DATE	NUMBER/REV
5/MAY/15	351HT/0512866–PS/REVB

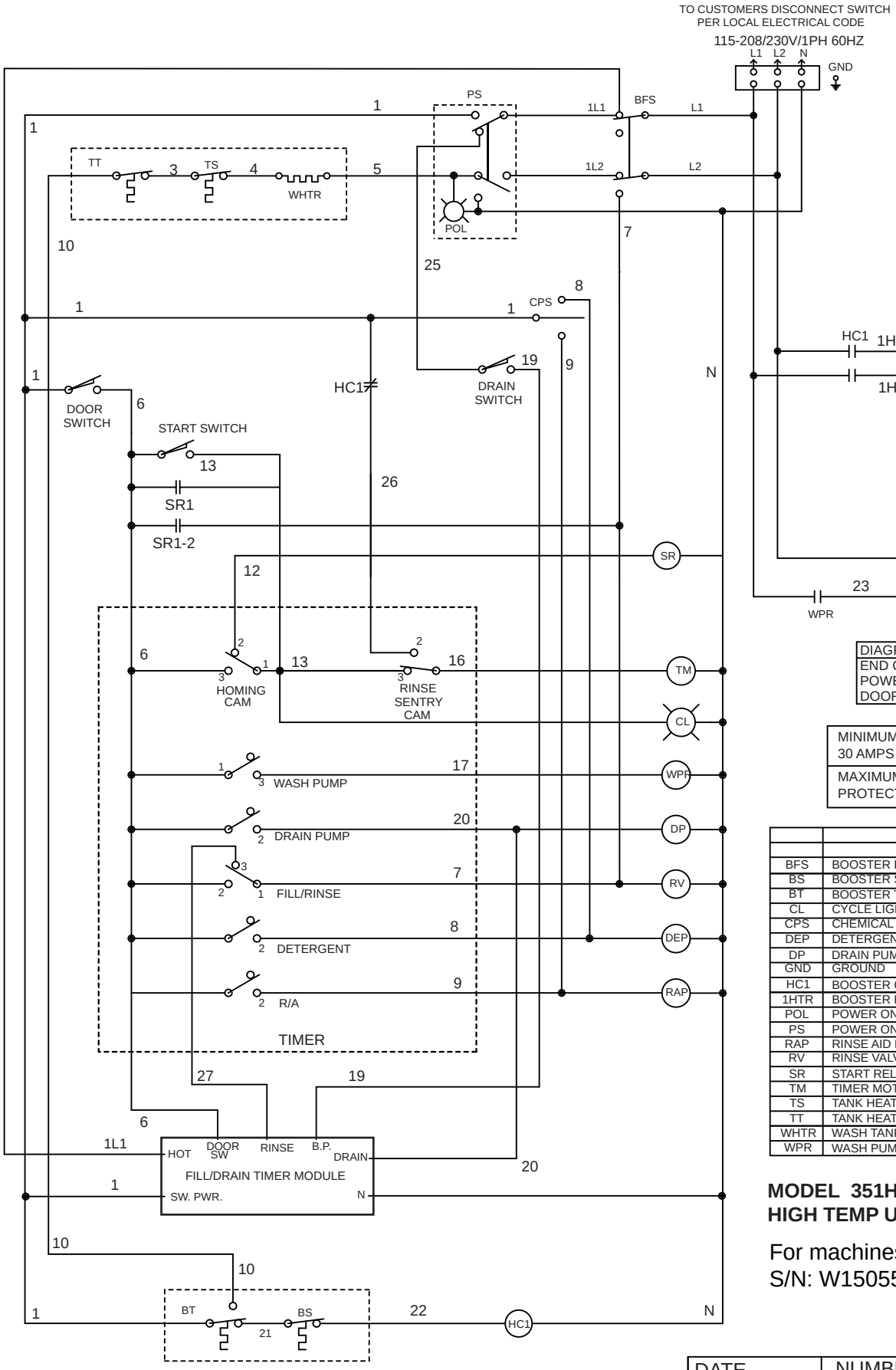


DIAGRAM STATE
END OF CYCLE POWER-OFF DOOR-OPENED

MINIMUM CIRCUIT AMPACITY 30 AMPS
MAXIMUM OVERCURRENT PROTECTION 30 AMPS

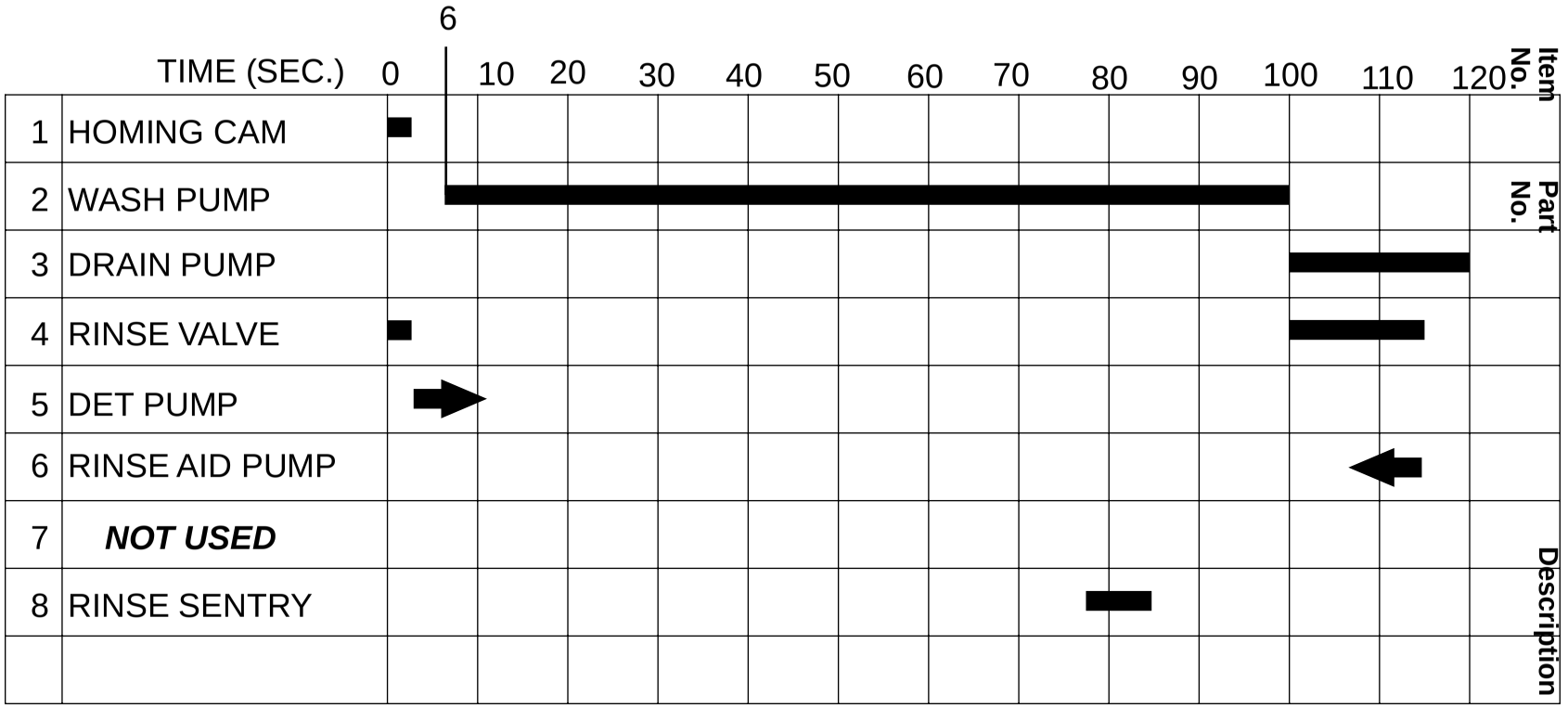
BFS	BOOSTER FILL SWITCH
BS	BOOSTER SAFETY THERMOSTAT
BT	BOOSTER THERMOSTAT
CL	CYCLE LIGHT
CPS	CHEMICAL PRIME SWITCH
DEP	DETERGENT PUMP
DP	DRAIN PUMP
GND	GROUND
HC1	BOOSTER CONTACTOR
1HTR	BOOSTER HEATER
POL	POWER ON LIGHT
PS	POWER ON SWITCH
RAP	RINSE AID PUMP
RV	RINSE VALVE
SR	START RELAY
TM	TIMER MOTOR
TS	TANK HEAT SAFETY THERMOSTAT
TT	TANK HEAT THERMOSTAT
WHTR	WASH TANK HEATER
WPR	WASH PUMP RELAY

MODEL 351HT
HIGH TEMP UNDERCOUNTER

For machines built prior to
S/N: W150551128

DATE	NUMBER/REV
25-FEB-09	351HT/0512866/REVA

TIMING CHART



MOYER DIEBEL LIMITED

351HT

DRAWING NO.

05CTIME

Qty.

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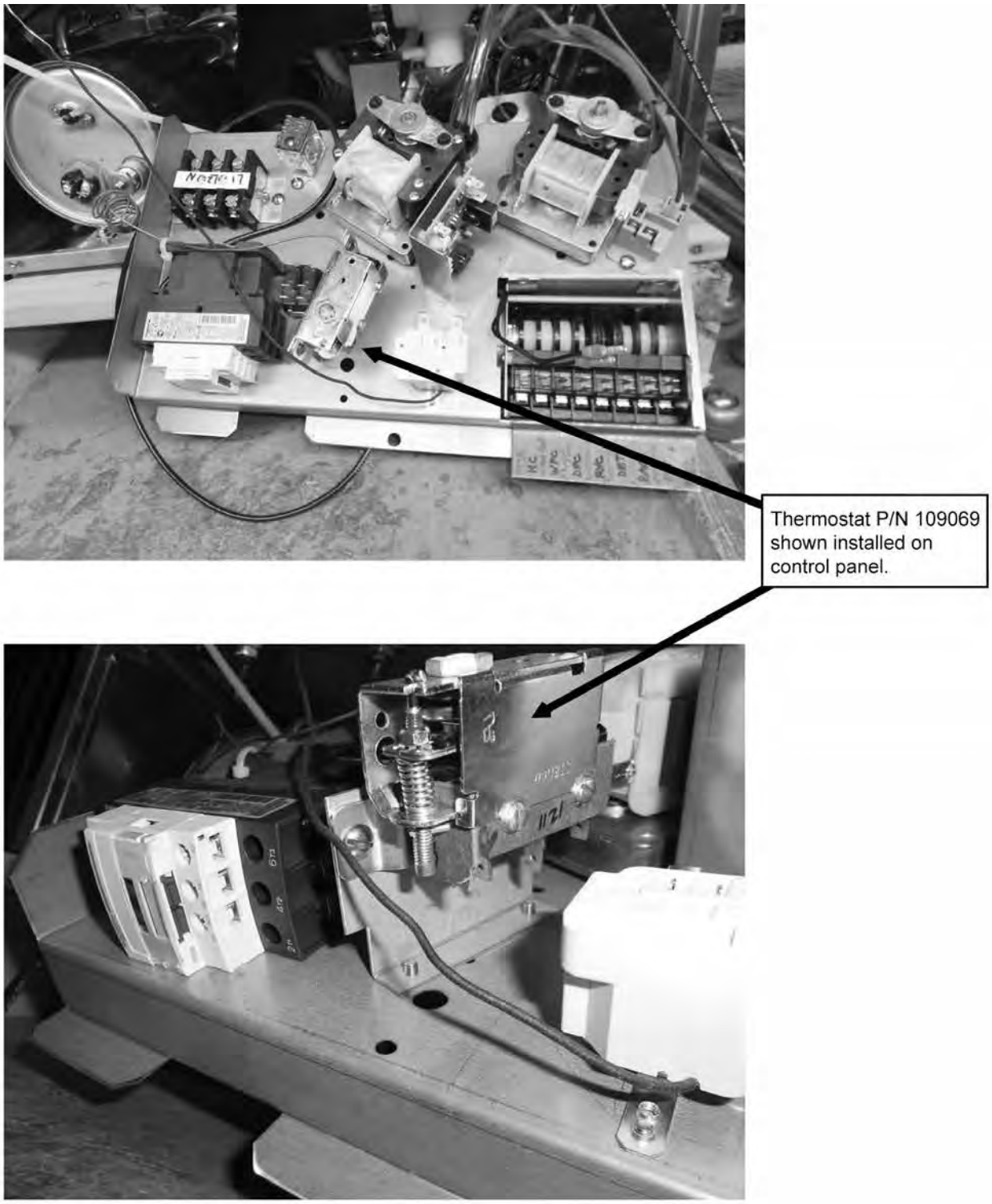
Service Parts Installation Instructions

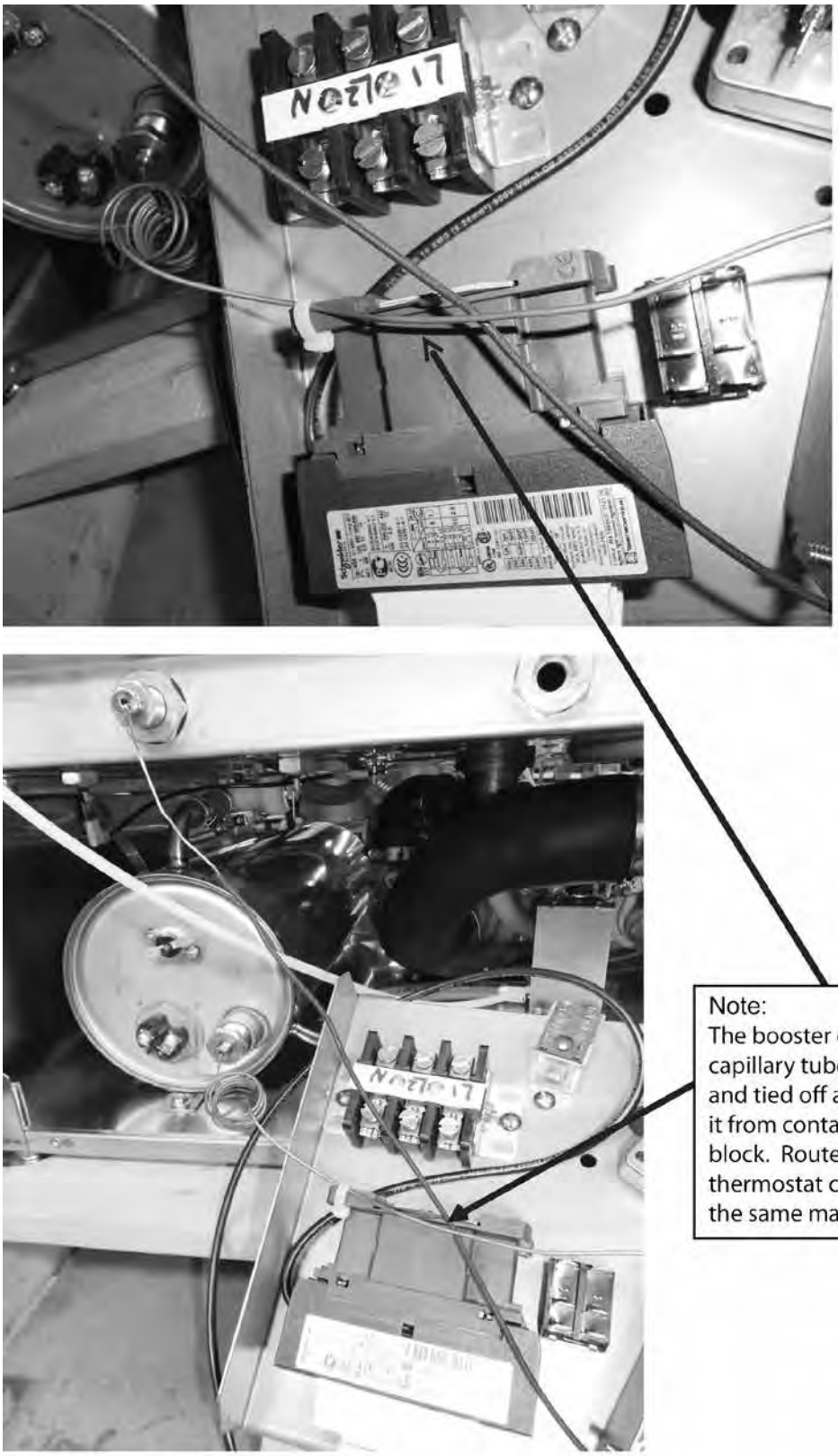
Booster Thermostat P/N 109069 ..... *56*
Pressure Gauge Piping Change *58*
Fill/Drain Timer Conversion P/N 0713133 ..... *60*
Fill/Drain Timer - Theory of Operation *64*

Service Parts Installation - Booster Thermostat P/N 109069

Beginning with S/N W120330086, the booster control thermostat, P/N 109069 replaced the existing thermostat, P/N 0512108 (identified by its white housing). On machines built prior to S/N W12033086, the old thermostat can be replaced with the P/N 109069 if necessary.

Refer to the photographs below and on the next page for installation instructions.

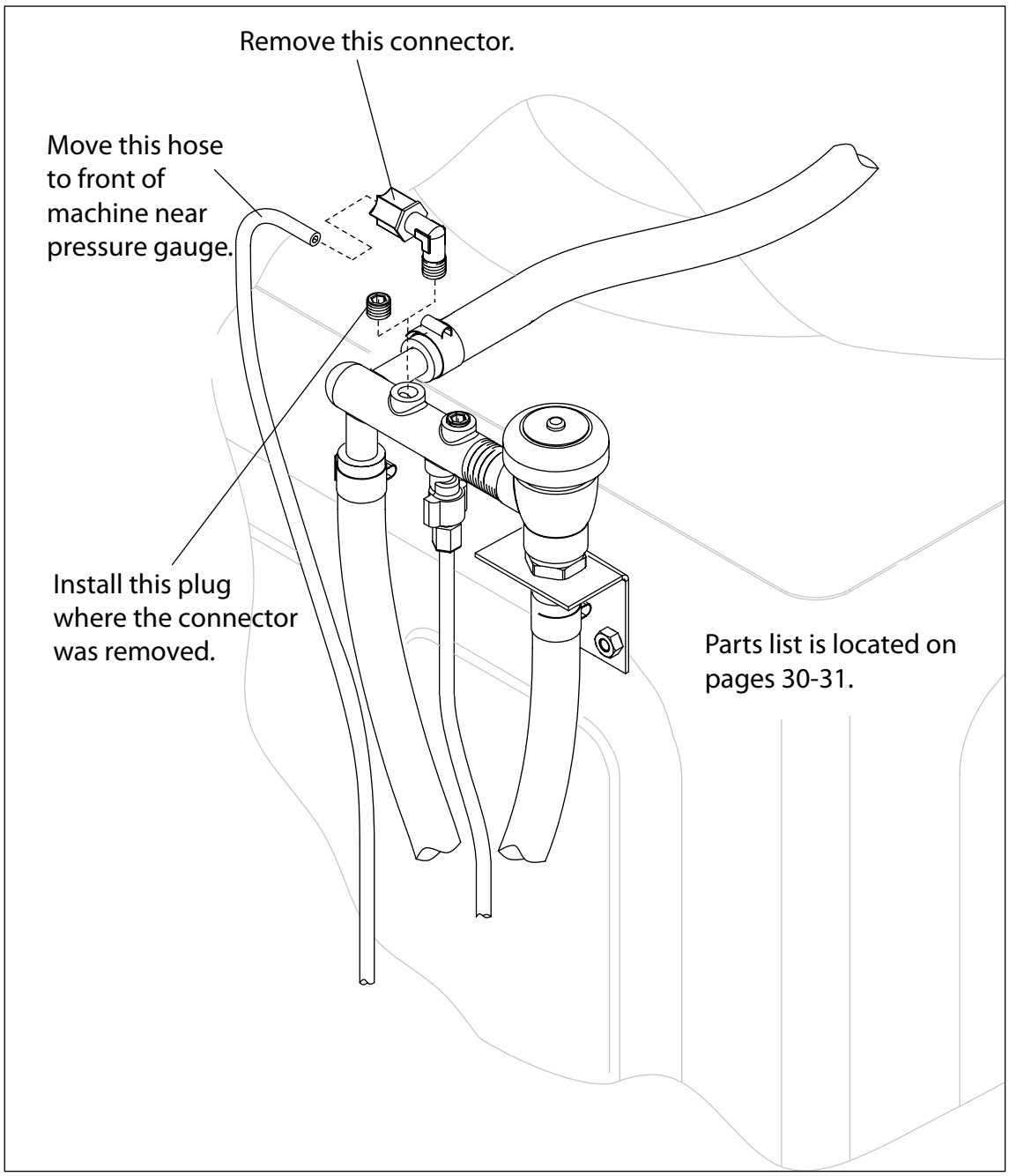


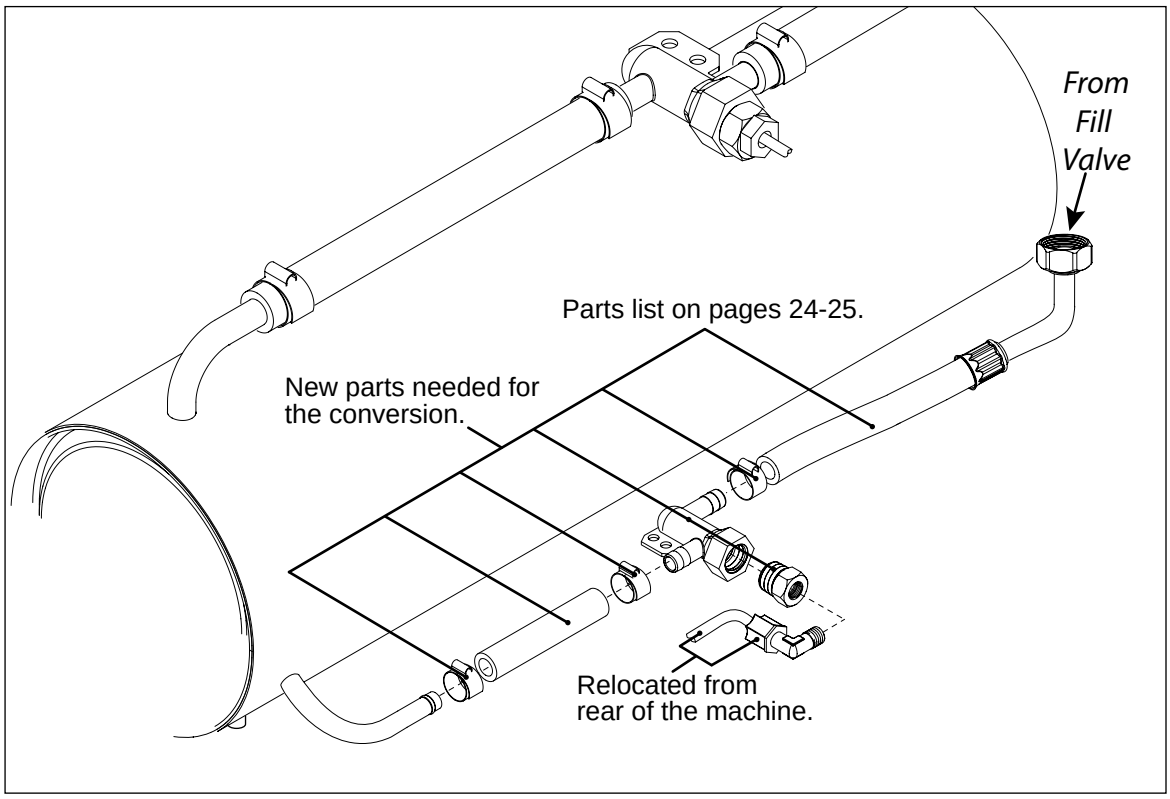


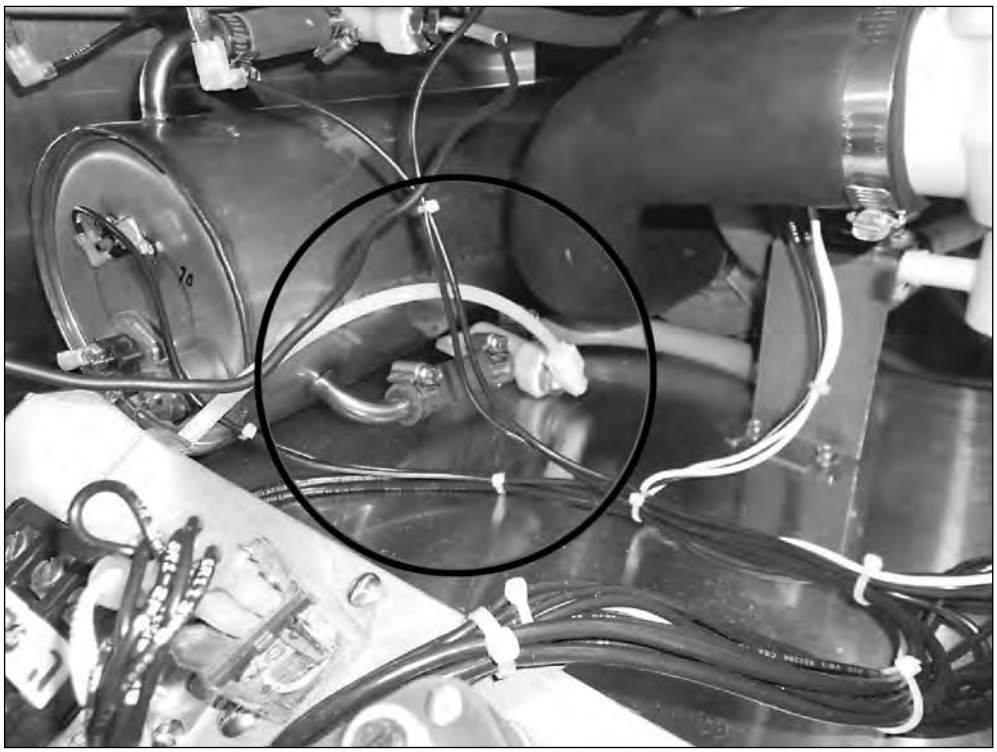
Note:
The booster control thermostat capillary tube must be routed and tied off as shown to keep it from contacting the terminal block. Route the wash tank thermostat capillary tube in the same manner.

Beginning with S/N W120631515, the pressure gauge tubing has been relocated from the top right rear corner of the machine to the booster located on the base of the machine. This change improves the operation of the final rinse pressure gauge.

Refer to the illustrations below and on the next page for installation instructions.


Remove this connector.
Move this hose to front of machine near pressure gauge.
Install this plug where the connector was removed.
Parts list is located on pages 30-31.


From
Fill
Valve
Parts list on pages 24-25.
New parts needed for
the conversion.
Relocated from
rear of the machine.

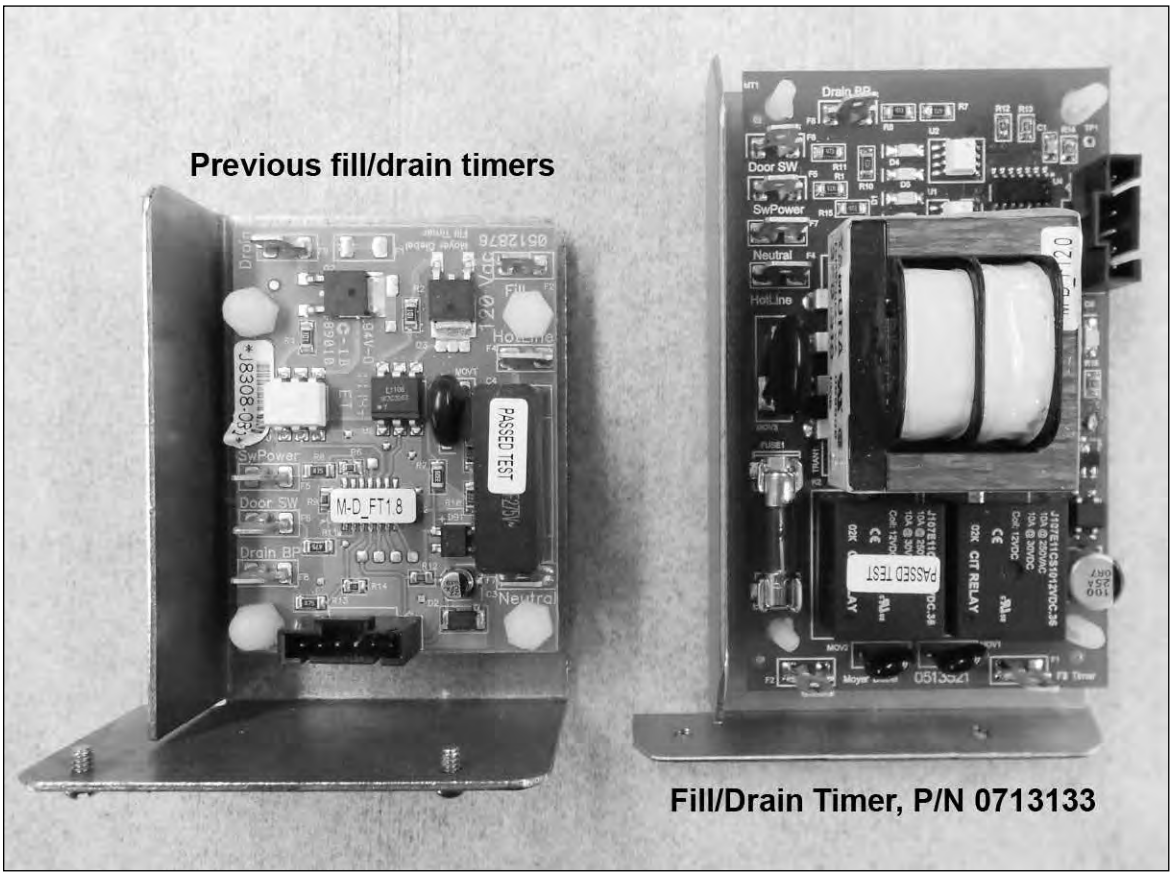


Fill/Drain Timer Conversion - P/N 0713133

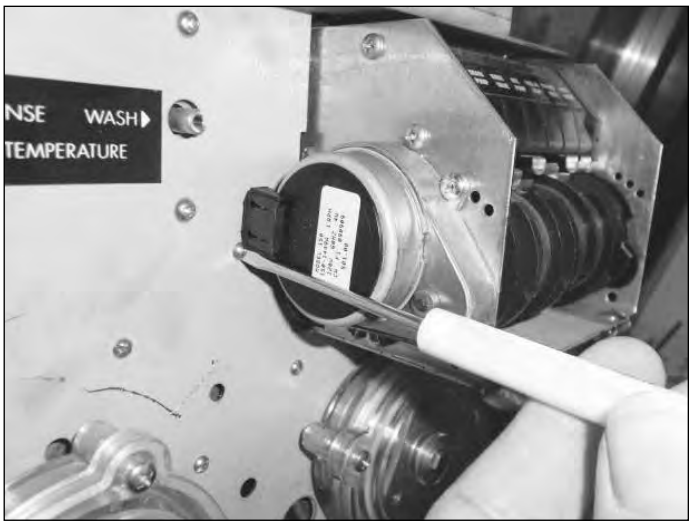
All S/N's for the 351HT have a new fill/drain timer, P/N 0713133. This new timer is slightly larger than previous timers but it still mounts in the same location as previous timers.

The only function of the fill/drain timer is to fill the machine at the beginning of the day and to drain the machine at the end of the day. Normal wash and final rinse cycles are controlled by the mechanical cam timer assembly.

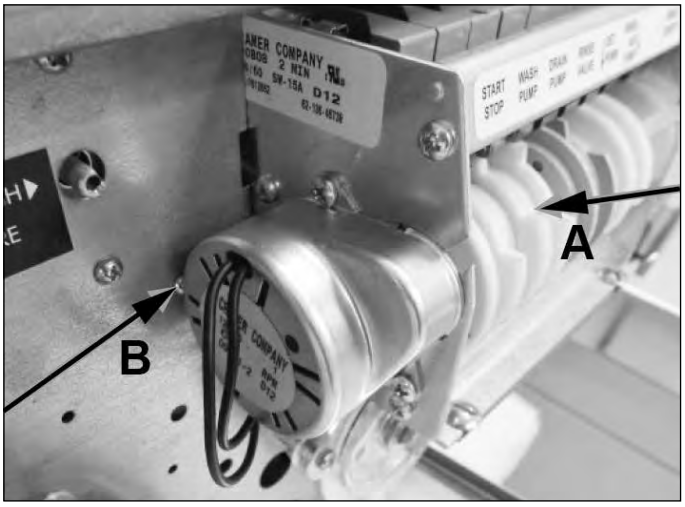
Refer to the illustrations below and on the following pages for installation instructions.



If your machine has the Cam Timer with black cams, then the board mounting screws can be accessed without removing the timer drive motor.

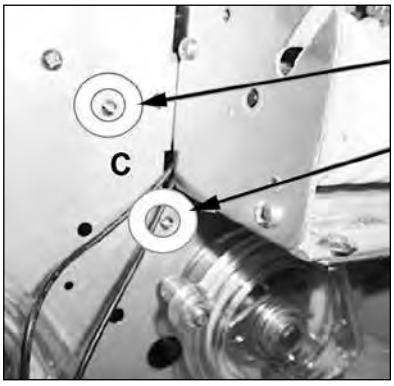


If your machine has white and gray timer cams (A), then it may be necessary to remove the timer drive motor to access one of the fill/drain timer mounting screws (B).



To remove the timer drive motor (A), remove the two phillips screws and drop the timer drive motor out of the way.

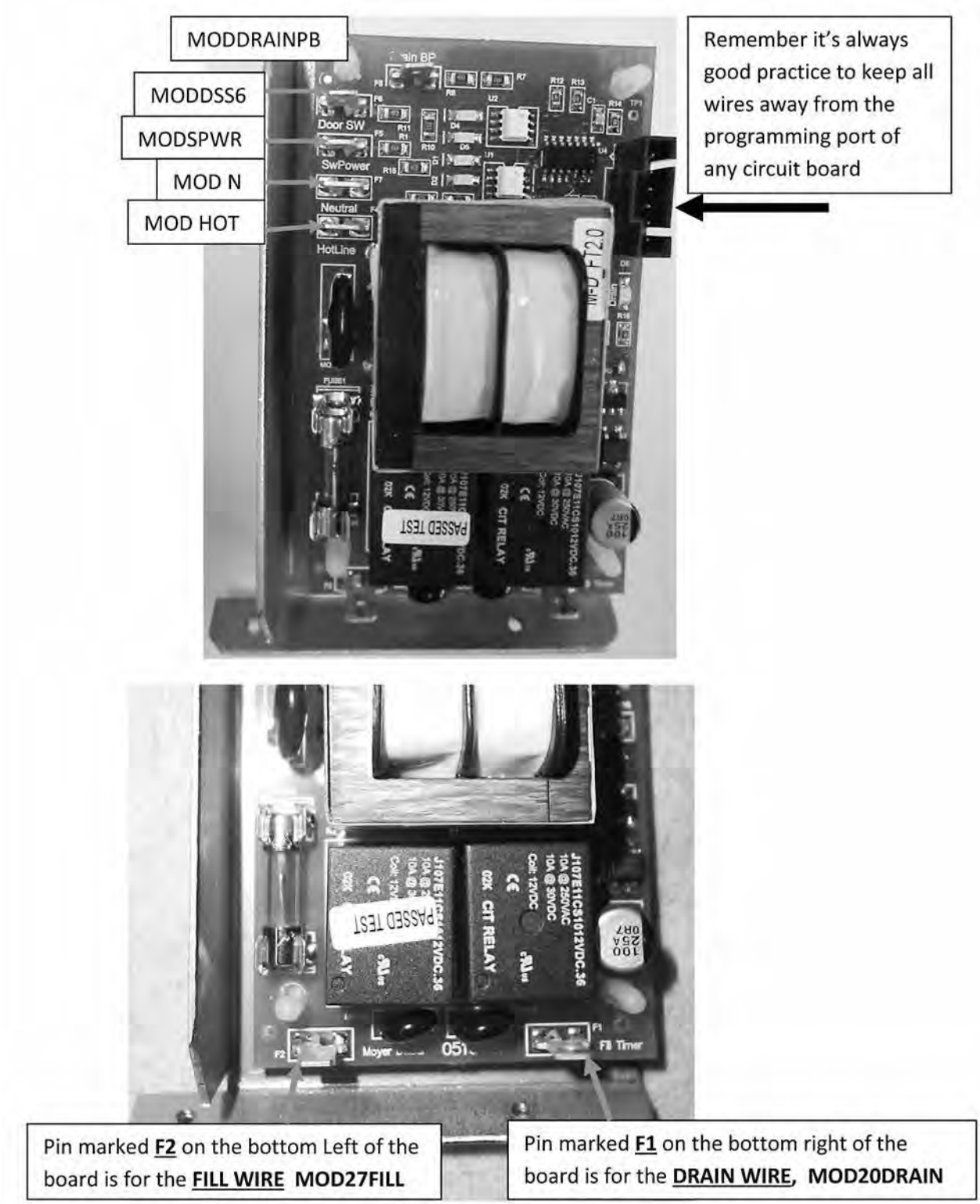
With the drive motor removed, you can access the fill/drain timer mounting screws (C) and remove them.



continued on next page

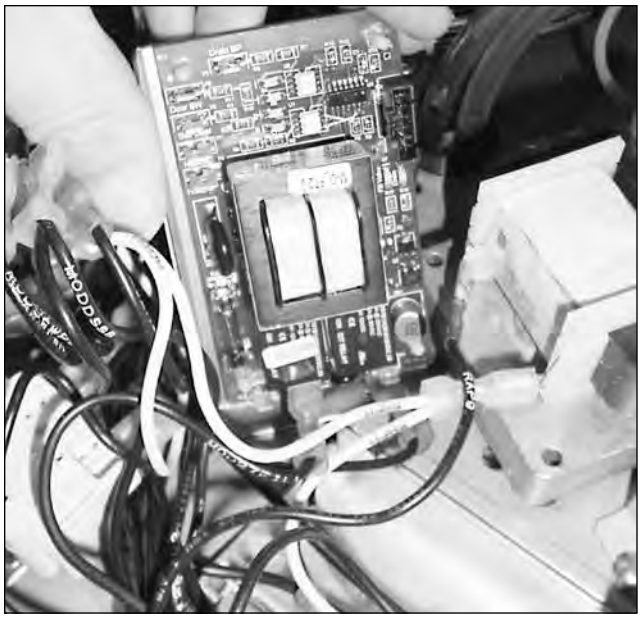
Fill/Drain Timer Conversion - P/N 0713133

continued from previous page


MODDRAINPB
MODDSS6
MODSPWR
MOD N
MOD HOT
Door SW
SwPower
Neutral
HotLine
Remember it's always good practice to keep all wires away from the programming port of any circuit board
PASSED TEST
02K CIT RELAY
J107E11CS1012VDC.36
10A @ 250VAC
10A @ 30VDC
Coil: 12VDC
F1 Fill Timer
Pin marked F2 on the bottom Left of the board is for the FILL WIRE MOD27FILL
Pin marked F1 on the bottom right of the board is for the DRAIN WIRE, MOD20DRAIN

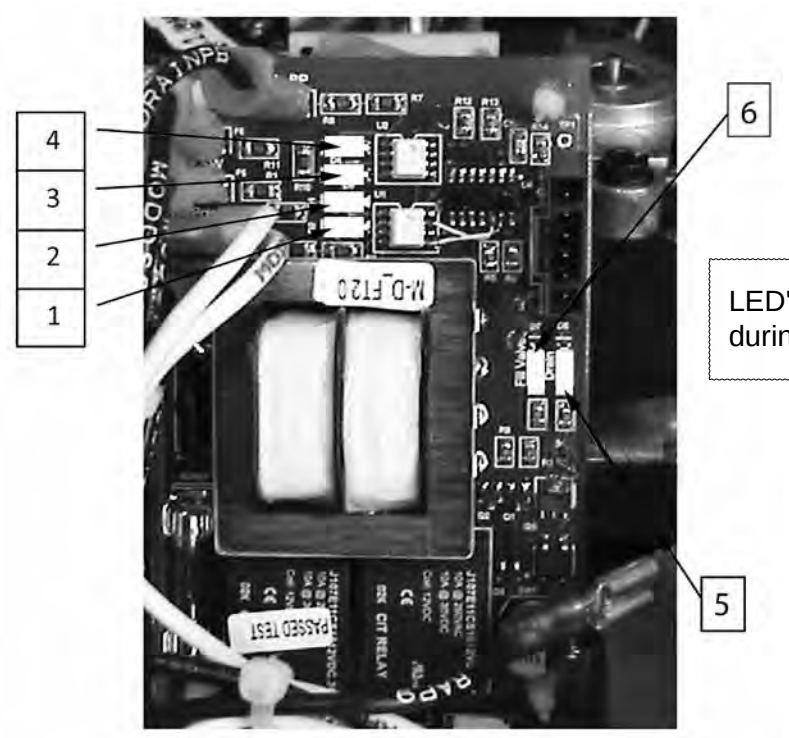
Fill/Drain Timer Conversion - P/N 0713133

Connect the wires as shown on the previous page and reinstall the mounting screws. Reinstall the timer motor.



The new board shown with wires connected and mounting screws installed. The installation is complete.

Fill/Drain Timer Board - Theory of Operation



1. The new fill/drain timer board has built-in diagnostics.
2. LED's (1, 2, 3, and 4) illuminate under the following conditions:
   a) LED 1 illuminates when power from circuit breaker is ON and booster/fill switch (service switch) is ON.
   b) LED 2 illuminates when machine ON/OFF switch is ON and circuit breaker in ON.
   c) LED 3 (Door switch LED) illuminates when door is closed, machine ON/OFF switch is ON and circuit breaker in ON. LED 3 goes out when door is open.
   d) LED 4 only illuminates momentarily when the drain switch is pressed and the machine ON/OFF switch is OFF.
   e) LED 5 (Drain LED) illuminates when the Power from the circuit breaker is ON, the machine ON/OFF switch is OFF, and the momentary drain switch has been pressed to start the 50 second drain cycle. The door can be opened during the drain cycle, closing the door resumes the drain cycle where it left off.

   NOTE: LED 5 will illuminate during the fill cycle because the drain pump also runs during the fill cycle.

   f) LED 6 (Fill Valve LED) illuminates when the circuit breaker is ON, the machine ON/OFF switch is ON (3 second delay), and the door is closed.

   NOTE: LED 5 will illuminate during the fill cycle because the drain pump also runs during every 70 second fill cycle.